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The Role of Government in Medicine

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• **On the fundamental question of how far a government should be involved in health services, the author believes these things can appropriately be said: The government should continue to assume complete control over public health measures, and public health officials could well be permitted to invade medical services insofar as is necessary to achieve public health ends.**

To assist in the production of medical personnel, it is also fitting for the government to provide for increased teaching facilities, higher salaries for teachers in the medical field and scholarships for worthy students.

In the area of insurance and prepayment plans, a really intelligent supervision of such devices, with the exercise of no more arbitrary governmental power than is now used by the various other regulatory commissions, is a suitable governmental function. The government's buying policies for its wards, rather than providing direct medical services for them, should be encouraged. This would give the private practice of medicine a boost and would improve the quality of medical care. Government should encourage the regionalization of medical services with as much of the actual controls exercised at the local level as can be achieved. Private means should be utilized for the provision of these services and public means should be used for their payment when this is an obligation of the government.

The problem of mass education in health matters should be tackled by government. It would be a fine thing if the medical profession and governmental agencies could agree upon delineation of their respective roles in the health field.

Because further experimentation is needed before the ideal solution is found, both government and organized medicine should encourage the exploration of new approaches.

THE HEALTH of the people is a proper concern of government. This has always been true. But now, when it is demonstrable that the death rate, the life expectancy and the incidence of many diseases are all proportional to the efforts and expenditures put forth, the responsibility is inescapable. Everywhere the people demand that they be provided with these benefits. It has now become accepted that access to health services of high quality is a fundamental right which government must guarantee if the individual is unable to do so. The result of this demand has been to bring socialized medicine to most of the great countries of the world.

Presidential Address for the American Association of Medical Clinics at their Annual Meeting in New Orleans, October 5 to 8, 1960. Submitted October 19, 1960.

In America we have achieved a high level of health without complete governmental control, although, to be sure, with a considerable degree of governmental participation. Deciding the exact extent of this participation is a matter of great national importance, and at this moment a matter of great political expediency as well. The solution of the problem constitutes a great and urgent challenge. Some attempts to meet this challenge will be made in this paper.

EFFORTS OF INDIVIDUALS

The individual's own effort is the most important single element in the preservation and promotion of his health. But if his effort is to be effectual, it must be intelligent and well informed. To see that he is so

informed is a proper governmental function. I would therefore propose that in the schools, over the radio and television, and by means of pamphlets and books, a campaign be instituted under the direction of the Department of Health, Education, and Welfare to make America the best educated nation in matters of health. Such well-informed people will take proper care of themselves and will make intelligent demands upon government. The educational campaign should stress the importance of individual responsibility for provision of health services for himself and for his family. The great role played by preventive medical measures should receive emphasis in order to enlist public support for proper public health measures and for proper salaries for public health workers. People should be told what they can do for themselves by personal prophylaxis, immunizations, routine physical checkups, cancer checkups and all the many things people can do for themselves before they ask for governmental aid.

PROVISION OF MEDICAL PERSONNEL

Coal cannot be mined without coal miners. Medical services cannot be provided without medical personnel. There is a shortage of medical personnel at every level. The increased demand for medical services and the competitive attractiveness of industry and business for qualified personnel have joined to bring about an acute shortage of physicians, nurses and technicians of every kind. This shortage cannot be met without governmental aid, and in view of the social importance of a trained body of medical personnel it is entirely proper that government should assume the responsibility for providing the help.

There are various things that should be done. Aid to educational institutions in the form of direct grants for building and equipment in order that facilities be expanded is perhaps the most urgent. Grants to supplement the inadequate salaries of professors would keep competent men in teaching who are being lost to the more lucrative field of practice. And big enough scholarships to prospective students to enable any qualified boy or girl who has the motivation to go into one of the medical or paramedical professions would be in order. This device might well be used to divert young people from the farms where fewer and fewer workers are needed, or from industries where automation is resulting in technological unemployment. In this great, rich country every boy or girl who has the capabilities and the desire should be enabled to study medicine. Many cannot today.

Along with the provision of money for expansion of medical education there is need for a severe reappraisal of our educational methods. The utilization of modern audio-visual methods would greatly increase the output and decrease the cost of producing physicians. In addition, the absurd lengths to which nursing education has gone should be reexamined. The whole matter of the production of properly trained paramedical personnel needs a great deal of attention by both government and private educational institutions.

RESPONSIBILITY FOR RESEARCH

The present state of our health has resulted from research. Its future progress depends on research. Government has done much to encourage this through the grants from the National Institutes of Health. This program should be continued and extended.

But dollars are not enough. Again, there is a shortage of trained people. The creation of an elite, dedicated corps of research men and women might be accomplished if the present incomes of research scientists were supplemented by effective grants to stay in effect so long as the individual continued in research, regardless of whether he worked in foundations, in schools or in industry. Put the money into projects, yes, but, more importantly, put the money into people. Encourage as much of this research as possible to be done in private institutions.

Every town of 25,000 people or more should have a medical research institute so that any physician who has a bright idea, even though in practice, may have a chance to implement it. The possible dividends are staggering—a cure for cancer, a preventive of arteriosclerosis would have immeasurable financial value. It would be perfectly proper for the government to provide matching funds, as is now done in other fields, for the establishment of these small peripheral research institutions. If there is considerable local interest in raising matching money on a philanthropic basis, the government should see to it that matching funds are made available for construction and a certain amount as well for maintenance after the institution has been founded. The encouragement of research in this way is an appropriate function of government and such a plan should be instituted as a supplement to the already well advanced programs of medical research.

PUBLIC HEALTH MEASURES

There is no real dissent from the notion that government should assume control of so-called public health measures, but, brilliant though the achievements in this field have been, much more needs to be done. Particularly, the salaries of people in this field should be raised so that there exists

some motivation in addition to the dedication that has characterized people in this field. There still exist perhaps fifteen diseases which could be eliminated by the application of principles already known and proven. That this condition persists is a reflection upon our intelligence as a nation. So, strengthen the entire public health services at every level.

Because of improved communication and transportation, narrow parochialism in public health measures and organization should be abandoned. There should be a completely coordinated system from the community level clear to the federal level, and states and communities should be willing to abandon enough of their autonomy to make this country-wide public health service effective.

PROVISION OF MEDICAL SERVICES

The real dissent comes in the provision of medical services in the strict sense of patient care. It is on this point that the cry of "socialized medicine" is raised and the most bitter controversy occurs. There are those who affirm that any intrusion of government into patient care destroys the physician-patient relationship and degrades the quality of medical care. And, on the other side, there are those who say that the government cannot stand by idly while people die or suffer from untreated disease. If a proper solution or resolution of this problem can be found, the "render unto Caesar" boundary may be delineated.

It is well to realize at the outset that government is already deeply involved in the provision of medical services. If one includes the beds for the mentally ill, 70 per cent of the hospital beds now available are government beds. Of the 20 billion dollar bill for all health services, at least 4 billion is paid by government dollars. Indeed, there are certain areas where there is no dissent from the present assumption of patient care by government. The care of military personnel of course is one of these. And on the civilian side, the care of the mentally ill, at first assumed by governmental agencies as a matter of necessity, is now accepted pretty generally. And there is little criticism of community care of indigents, the tuberculous and, to some extent, of persons with certain communicable diseases. But further encroachment, such as the tremendous veterans' program, the care of the dependents of military personnel, and now the care of the aged ill, has aroused desperate controversy. And even more resentment has been developed against systems of nationwide government-sponsored health insurance. Indeed, a solution is urgently needed. What to do?

FINANCING OF MEDICAL SERVICES

The last twenty years has seen a great change in the financing of medical services in the unprecedented growth of various forms of health and hospital insurance. The "status quo" position affirms that if this process is encouraged and not smothered by government interference, it will solve the problems in time. The opponents stress the inadequacy of the present plans, their incompleteness, their excessive overhead and their prohibitive costs as reasons for governmental intervention.

I believe that it is fair to say that most people want medical services on a prepaid or insurance basis and that most of them are not completely satisfied with the coverage now available. There is an area for governmental supervision and an area for private enterprise. In view of the extent and importance of this field, it would be appropriate for a federal health insurance commission to be set up and given supervisory powers similar to those of the Interstate Commerce Commission and the Federal Aviation Commission. This commission might well set up the criteria that acceptable health insurance plans would have to meet; it might even design the ideal policy, could set up regulations limiting the commission and the overhead that might be charged and, in general, bring order out of the present chaos.

When and if a proper prepaid plan in private hands is developed, then various components of government might well try policies, in behalf of these groups for which it assumes responsibility, rather than the provision of services. Let the veterans be given adequate prepaid policies, let the same be done for military dependents and the same for indigents. Let the services be provided by private sources rather than by salaried governmental employees.

Organized medicine, private physicians, solo practitioners and group practice clinics should intensify their efforts to solve this problem. The widest variety of experimentation should be encouraged. The forces of organized medicine would do well to cease their hostility toward groups that attempt their own solutions. A spirit of tolerance should prevail, with intolerance only for poor quality of medical services. Particularly, the great potential of private medical groups to solve this problem should be recognized and encouraged. A proper group giving direct prepayment services to its own group of patients is the most efficient and generally satisfactory device for providing medical services of high quality on a prepaid basis.

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Idiopathic Pulmonary Hemosiderosis

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• **Idiopathic pulmonary hemosiderosis is a rare condition manifested by recurrent pulmonary hemorrhage of unknown cause, diffuse radiologic abnormalities, cough, hemoptysis and moderate to severe hypochromic anemia. Diagnosis can be confirmed by iron stains of the sputum or lung aspiration or by biopsy. Prolonged spontaneous remission may occur without the use of corticosteroid therapy. Studies here reported indicated that the anemia is hypochromic and microcytic anemia of blood loss and iron deficiency, in spite of the presence of large amounts of iron in the pulmonary tissue. Correction of the anemia by intensive iron therapy and transfusion is considered an important part of therapy.**

IDIOPATHIC PULMONARY HEMOSIDEROSIS is a rare condition affecting both children and adults. The authors have had opportunity to observe two patients with this condition. One patient had onset of symptoms in his teens and the other in early infancy. A brief review of the literature concerning this interesting condition is presented, together with a description of the cases observed by the authors and some comments concerning the hematological aspects of the disease.

History

In 1850, Virchow[24] first described, in autopsy specimens, a condition of brown induration of the lungs. Ceelen,[7] in 1931, was the first to describe the clinical course of the disease, in two cases, and the observations at autopsy. In 1948, Wylie[27] collected reports of 17 cases from the literature and reported an additional seven. With the exception of one 38-year-old man, the patients in all the 24 cases were children. In 1956, Wynn-Williams and Young[28] collected reports of 50 cases from the literature. Fifteen of the patients were adults, and they added a report of a case in an adult. Since that time, 19 more cases have been reported in the English language literature,[13,17] 11 in adults and eight in children.

Symptoms

Cough and hemoptysis are the predominant pulmonary symptoms. In infants and young children, the blood is swallowed and the manifestation may be in the form of vomited blood or melena. In acute episodes, cyanosis, tachycardia, fever, dyspnea and occasionally jaundice are evident. Clubbing of the fingers is sometimes present, and sometimes pallor consistent with a degree of anemia. The lungs may seem quite normal upon physical examination even in the presence of decided radiologic abnormality.

Roentgenographic Observations

Schaar and Rigler[19] said that hemosiderin can be detected in the lungs by x-ray examination in only two conditions, mitral stenosis and idiopathic pulmonary hemosiderosis. The x-ray findings have been described by Elgenmark and Kjellberg[9] as follows: "Diffuse shadows of increased density scattered more or less all over both lung fields and absolutely independent of the borders of the lobes. In some cases, there is a tendency to become denser at the bases; this cloudiness, however, often alternates with mottling of a mossy appearance in the early stages of the disease, as well as in the remissions. The mottling is the dominating feature."

Fleischner and Berenberg,[10] in 1954, gave the following x-ray description: "Diffuse opacities with reticular design rather than mottled, with emphasis on the flecklike consolidations such as are seen in miliary tuberculosis." It is evident, however, from a perusal of the descriptions given in the published reports that there is no pathognomonic or uniform roentgenographic manifestation. Diffuse or patchy densities, massive consolidations, miliary infiltrations and fine diffuse reticulonodular infiltration have all been described.

Hematology

Anemia is present at some time in all cases although spontaneous remissions may occur (Gluck).[12] The anemia is hypochromic, microcytic, and characteristic of iron deficiency due to chronic loss of blood. Reticulocytosis, hyperbilirubinemia, hyperurobilinogenuria, presence of nucleated erythrocytes in the peripheral blood, occasional positive reaction to a Coombs test and the presence of cold agglutinins have suggested the presence of hemolysis.

Clinical Course of the Disease

The clinical course is characterized by remissions and exacerbations. Anemia may improve spontaneously but the roentgenographic manifestations, once

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abnormal, never return to normal although acute massive infiltrations partially resolve. The prognosis is serious. Soergel,[22] in 1957 in a review of reports of 32 cases collected from the literature which were diagnosed during life, reported that nine of the patients died, ten had active disease, five had residual symptoms and eight were symptom-free at the time of his report. The mean duration in the reported fatal cases was 2.9 years with a range of from five weeks to ten years. Patients who were less than three years of age at the time of onset had a somewhat better prognosis.

Diagnosis

Diagnosis is made by the presence of roentgenographic abnormalities, anemia and evidence of bleeding into the lungs. A number of investigators, however, (Waldenstrom, 1944[25]; Walton and Williams, 1951[26]; Steiner, 1954,[23] and Kushner, 1958[15]) have emphasized that there may be no abnormalities observed on roentgen studies even in the presence of severe anemia. The differential interpretations of the x-ray features should consider miliary tuberculosis, pneumoconiosis, heart failure, periarteritis, sarcoidosis and mitral stenosis. In the earliest reported cases the diagnosis usually was made at autopsy. Nowadays the diagnosis is considered made if typical x-ray features and anemia are present and confirmatory evidence can be obtained by means of the demonstration of hemosiderin-filled macrophages in sputum or in material washed from the stomach, or of hemosiderin-filled macrophages obtained by lung puncture.[11] It is, of course, important to consider other possible causes for the presence of these heart failure cells.

Pathogenesis

The pathogenesis of the disease is, at present, still unknown. Several theories have been advanced: Wylie[27] originally considered this to be an elastic fiber disease. In histologic studies of autopsy specimens he noted capillary stasis and heart failure cells; there were abnormalities in the elastic cells—a decrease in the elastic fibers and thickening of the fibromuscular elements in the intra-alveolar septum. Fibrous tissue was increased and elastic tissue decreased. Wylie believed that this led to a lack of distensibility, with consequent peripheral stasis in the capillary bed, leading to hemorrhage and diapedesis and the presence of hemosiderin. However, he held that since cases have been described in which there were no elastic fiber changes, it is most likely that the elastic fiber changes are not primary but are secondary to the hemorrhagic phenomena.

The second theory, advanced by Steiner,[23] is that the antigen antibody autoimmune mechanism is involved. Offered as supporting evidence is the presence of eosinophilia in the cases reported by Steiner and by Gluck.[12] In Steiner's case, some improvement followed splenectomy. The attacks became less severe and there was less anemia. However, clubbing of the fingers, roentgenographic abnormalities and cyanosis remained.

Bruwer, Kennedy and Edwards,[5] in 1956, also reported an exceptional case in which there was extensive necrotizing arteritis in the small arteries of the lungs, necrotizing arteritis in systemic arteries and active glomerulonephritis.

A third theory of pathogenesis, advanced by Soergel[22] in 1957, is as follows: It has been shown that there are periodic increases of pressure in the lesser circulation. It is possible, therefore, that this increase in pressure may affect the fine anastomotic exchange vessels between the bronchial and the pulmonary circulatory systems which, in pulmonary hypertension, are in a varicose state. Therefore, hemorrhage may occur at the points of arterial-venous anastomosis in the lungs. The cause of the increase in pressure is unknown; in fact, it has not been definitely established that this does occur in this disease.

A fourth possibility, advanced by Propst[16] in 1955, is as follows: Observing that there is an increase in acid mucopolysaccharides within the elastic fibers of the small blood vessels, he postulated that the elastic fibers are thereby weakened, the blood vessels dilate and bleeding by diapedesis occurs. Iron is liberated, and as mucopolysaccharides have a strong affinity for it, the iron becomes encrusted on the elastic fibers. This further weakens the blood vessels and the process extends to larger vessels. The actual cause of the increase in the mucopolysaccharides is unknown.

Treatment

Reports of treatment with splenectomy and with corticosteroids have been published.

Splenectomy: Wylie,[27] in one case, noted some slight improvement after splenectomy. Barlow[1] observed none. Cordeiro[8] reported cure in two cases. However, both patients had associated thrombocytopenia and it is probable that they did not have what is now considered idiopathic pulmonary hemosiderosis. Steiner[23] noted improvement in a case he reported. Thus, in only one of five reported cases of idiopathic pulmonary hemosiderosis in which splenectomy was done was there significant improvement.

Steroid therapy: A number of patients have been treated with corticosteroids. Some improvement was reported in three of them.[4,13,14] In at least five patients,[6,15,18,22] no improvement resulted. In view of the frequency of spontaneous remission, no definite conclusions can be drawn.

CASE 1. The patient, a Caucasian male, was observed to be anemic at the age of 17 when he was examined because of fatigue and pallor. He was given a transfusion of one pint of whole blood, then was treated with iron by mouth and injection. The hemoglobin content did not reach normal levels. A year later he was rejected by the army because of anemia. The first episode of gross hemoptysis occurred at age 20. It lasted two days. X-ray films of chest and sputum studies at that time were reported to show no abnormality. Two years later, wishing to enlist in the army, the patient took double the recommended amounts of iron tablets and "just passed the examination." During his first week of basic training, he started coughing up blood and became fatigued. He was put in Letterman General Hospital and there in a period of a year numerous investigations, including bronchography and bronchoscopy, were carried out. At the end of that time, the patient was discharged from the hospital and from the army with a diagnosis of "ill-defined condition manifested by severe hypochromic anemia; hemoptysis; foamy, greasy stools and bizarre pulmonary appearance of both lower lobes as visualized by x-ray." Thereafter he had several episodes of gross hemoptysis and again became anemic.

He was first seen by the authors in 1952, at the age of 23, because of weakness and anemia. The family history was negative for the presence of either anemia or hemoptysis. One sister had been rejected as a blood donor. For most of his life he had had varying symptoms referrable to the gastrointestinal tract, usually consisting of episodes of vomiting, cramping, abdominal pains and bouts of diarrhea characterized by liquid stools, which were frequently foamy, light in color and foul-smelling.

Upon physical examination the patient was observed to be pale, well-developed and well-nourished. Breath sounds were normal and no rales were heard. Heart sounds were normal except for a faint soft systolic murmur at the apex. Blood pressure was 125/70 mm. of mercury. A summary of the laboratory examinations is shown in Table 1. In the subsequent six months, the patient received two blood transfusions because of increasing anemia. Figure 1 shows typical x-ray films of the chest in this case. Following pronounced hemoptysis, bronchoscopic examination was carried out but no abnormalities were seen in the visible tracheobronchial tree except for fresh blood which appeared to be coming from the right lower lobe bronchus. Roentgenographic films of the entire gastrointestinal tract and an intravenous pyelogram were all within normal limits. No abnormality was seen in a sigmoidoscopic examination. Erythroid hyperplasia was noted in a specimen of bone marrow but otherwise the examination did not help in diagnosis.

TABLE 1.—*Data on Laboratory Tests in Two Cases of Idiopathic Pulmonary Hemosiderosis.*

	Case 1	Case 2
Hemoglobin	5.4 gm.	7.9 gm.
Erythrocytes	3.29 (10^6)	4.89 (10^6)
Packed cell volume	24 per cent	28 per cent
Mean corpuscular hemoglobin	17 mcmg.	16 mcmg.
Mean corpuscular volume	73 cu. microns	57 cu. microns
Mean corpuscular hemoglobin content	23 per cent	28 per cent
Reticulocytes	2.6 per cent; 4.4 per cent	2.8 per cent; 3.8 per cent
Urinalysis	Normal	Normal
Icterus index	3.2 units	.....
Serum iron	46 gamma per cent; 34 gamma	.....
Total iron binding capacity	499 mcg.	.....
Iron saturation	6.8 per cent	.....
Glucose tolerance	Normal	Normal
Stool	Occult blood	Occult blood
Sickle cell preparation	.....	Negative
Hemoglobin electrophoresis	.....	A-A
Prothrombin	100 per cent	80 per cent
Prothrombin consumption	Normal	.....

In December, 1952, a diagnosis of idiopathic pulmonary hemosiderosis was considered. In March, 1953, severe hemoptysis occurred, the patient estimating that he had lost at least a pint of bright blood. He continued to raise small amounts of rust-colored sputum which, on microscopic examination, showed large numbers of macrophages containing large amounts of hemosiderin as stained by the Prussian blue reaction (Figure 2). In the ensuing two years, the patient several times had severe hemoptysis associated with sharp decreases in hemoglobin, requiring either oral or parenteral iron therapy. After January, 1955, hemoptysis occurred much less frequently than previously and it was never of such severity as to cause a decrease in hemoglobin content of the circulating blood. The clinical course is summarized in Chart 1. The patient was free of symptoms until August, 1955, when he began complaining of mild, intermittent shortness of breath. The vital capacity was normal. The arm-tongue circulation time was slightly prolonged. An electrocardiogram was interpreted as consistent with left bundle branch block. It was our impression that the patient was not in congestive heart failure and he was treated with mild sedation, which partially ameliorated the symptoms. Nine months later a complete pulmonary

function study was carried out at the Cardio-Respiratory Laboratory of the University of Southern California School of Medicine, with the conclusion that the dyspnea could not be accounted for on the basis of the decreased pulmonary function. There was slight desaturation of the arterial oxygen, slight prolongation of circulation time and an abnormal response to the Valsalva maneuver, all suggesting that the dyspnea may have been due to mild cardiac decompensation. The patient, however, continued to do well. He had no cardiac enlargement and digitalization was not required. These factors led us to conclude that he did not have primary cardiac disease. He was last examined on July 8, 1959, following an episode of mild hemoptysis, and no significant changes from the previous conditions were

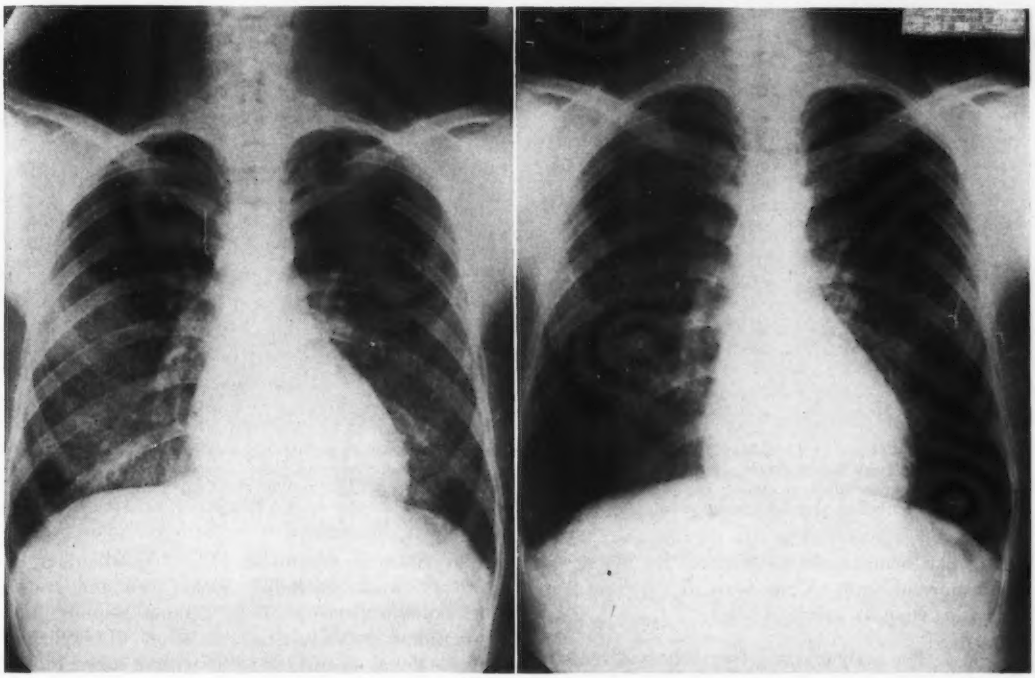

Figure 1.—(Case 1) *Left,* December 11, 1952. There is a very fine reticulated appearance of the lung parenchyma, symmetrical in distribution involving the lower two-thirds of both lung fields. *Right,* July 8, 1959, virtually no change in appearance since previous examination.

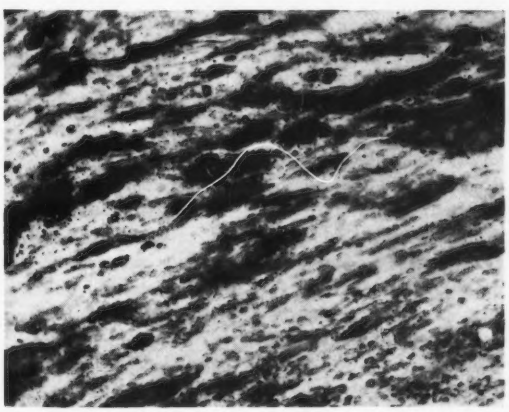

Figure 2.—(Case 1) Specimen of sputum (Prussian blue stain). Large numbers of macrophages loaded with hemosiderin granules are present. ×500.

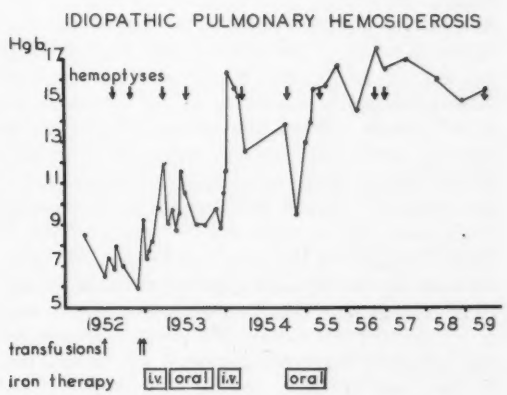

Chart 1.—Serial hemoglobin determination related to hemoptysis and therapy.

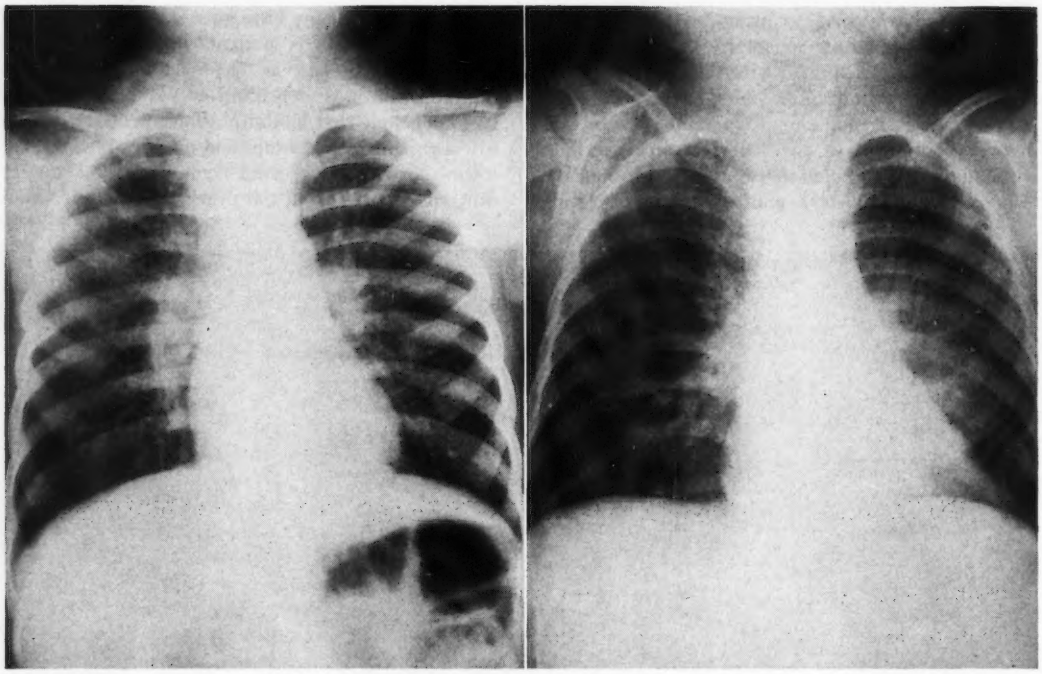

Figure 3.—(Case 2) *Left,* May 26, 1958. There is a non-specific increase in pulmonary markings in the central two-thirds of both lung fields. *Right,* January 7, 1959. There is a homogeneous "ground glass" density in the lower portion of the left hilar complex, probably representing site of rec ent hemorrhage. The rest of the lung fields show a slight degree of reticulation and fine nodulation.

noted. The hemoglobin content of the blood was within normal limits. X-ray films of the chest were about the same as previous films.

CASE 2. The patient was a Negro boy, 3 years of age when last observed, with a history of normal prenatal course and birth. He weighed 7 pounds 5 ounces at delivery. His mother died of post-partum hemorrhage. The child remained in the hospital for three weeks following birth because of excessive vomiting. He then was well until, at about the age of six months his physical development slowed, his weight increasing only 2 pounds in the next 9 months. He also had repeated respiratory infections, which were treated repeatedly with antibiotics without significant response. By one year of age, the child showed clubbing of the fingers and diminished gluteal mass and he was admitted to Kaiser Foundation Hospital, Los Angeles, for investigation. He was thin and appeared to be chronically ill. The lungs were clear to auscultation. There were no abnormal heart sounds. His physical appearance was typical of fibrocystic disease. It was learned that he had had frequent episodes of coughing and wheezing.

The hemoglobin content ranged from 7.7 to 9.2 gm. per 100 cc. (see Table 1). Examples of typical x-ray films are shown in Figure 3. All other laboratory work, including sickle cell preparation, hemoglobin electrophoresis, gamma globulin determinations, urinalysis, examination of sweat and of duodenal drainage, were within normal limits (Table 1).

The child had been admitted to hospital four more times in the first 15 months of life, at first for diagnostic study because of vomiting and chronic respiratory infection; and large, foul-smelling stools; then because of wheezing. During the stay in hospital at the age of 15 months, the patient had had "coffee ground" vomitus and tarry stools. No abnormalities were seen in x-ray studies of the upper gastrointestinal tract and the colon. Only a slight decrease in hemoglobin occurred at that time, the patient having been treated immediately with transfusions of blood and injection of iron intramuscularly. In January 1959, when the patient was 19 months old, the diagnosis of idiopathic pulmonary hemosiderosis was considered, and material washed from the stomach was observed to contain hemosiderin-filled macrophages. In March, 1959, thoracentesis was carried out and a small amount of pink-tinged material was obtained. On staining, it showed the presence of hemosiderin-filled macrophages. After the procedure a total of 10 cc. of iron

dextran* was given intramuscularly. For the next four months, the child had frequent episodes of vomiting of brownish gastric contents, and of passing black, tarry stools. The hemoglobin did not fall below 9.6 gm. per 100 cc. The patient was put in hospital four more times for vomiting, dehydration, fever and "asthma." He was not seen again for a period of six months—until January, 1960. At that time, at age 34 months, he had mumps and again had tarry stools. He was admitted to the Contagious Disease Unit of the Los Angeles County General Hospital. Blood examination there showed mild normochromic anemia (hemoglobin 10.6 gm. per 100 cc.) and a reticulocytosis of 4 per cent. X-ray films of the upper gastrointestinal tract and colon were normal. Melena ceased shortly after admission and no transfusions were necessary. In a telephonic communication with a parent in February, 1960, it was learned that the child was still not thriving and had frequent vomiting and apparent abdominal pain. Also, he had frequent respiratory tract infections.

DISCUSSION

Both cases illustrate characteristics of this syndrome in infants and adults. It is evident that prolonged spontaneous remissions may occur without the use of corticosteroid therapy. From these studies no additional information was obtained to clarify the pathogenesis of the pulmonary bleeding. It is our opinion, however, that the anemia in these cases is classical hypochromic microcytic anemia of iron deficiency due to chronic loss of blood, and that it responds to therapy with either oral or parenteral administration of iron. The paradox of a total body iron deficiency while one organ is overloaded with iron-containing pigment may be explained on the basis that the iron present in the lung is contained in hemosiderin-filled macrophages which are present predominantly in the alveoli or bound by a dense fibrous reaction in the interstitial tissues. This iron is not available for utilization by the bone marrow for hemoglobin synthesis. The laboratory findings of reticulocytosis, erythroid hyperplasia of the bone marrow, and peripheral blood normoblastosis, which suggest hemolysis, can be explained on the basis of response of the bone marrow to acute loss of blood. The increased amounts of bilirubin in the blood and urobilinogen in the urine may result from degradation of the heme pigments following the extravasation of blood into the alveoli. Similar changes, for example, are seen after massive hemorrhage into the pleural or peritoneal cavities or into large connective tissue spaces.

*Providing the equivalent of 50.0 mg. of elemental iron in each cubic centimeter.

It is our opinion that correction of the anemia by intensive iron therapy and transfusion, when indicated, is an important part of the therapy of these cases.

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REFERENCES

1. Barlow, A. D.: Pulmonary hemosiderosis, Proc. Roy. Soc. Med., 39:131-132, 1946.

2. Boyd, D. H.: Idiopathic pulmonary hemosiderosis in adults and adolescents, Brit. J. Dis. of the Chest (London), 53:41-51, January 1959.

3. Brook, N. H., and Kenealy, W. L.: Idiopathic pulmonary haemosiderosis: report of a case, New Zealand Med. J., 57:(322) 608-610, December 1958.

4. Browning, J. R., and Houghton, J. D.: Idiopathic pulmonary hemosiderosis, Am. J. Med., 20:374-382, March 1956.

5. Bruwer, A. J., Kennedy, R. L., and Edwards, J. E.: Recurrent pulmonary hemorrhage with hemosiderosis. Socalled idiopathic pulmonary hemosiderosis, Am. J. Roentgenol., 76:98-107, July 1956.

6. Burckhardt, D., and Vogel, C.: Ein betrag zur idiopathischen Lungenhaemosiderose, Monatschr. Kinderh., 103:455-460, October 1955.

7. Ceelen, W.: Die Kreislaufstörungen der Lungen. In Henke-Lubarsch: Handbuch der speziellen pathologischen Anatomie und Histologie, Berlin, J. Springer, Vol. III/3, pp. 1-163, 1931.

8. Cordeiro, M.: Un cas d'hemosiderose pulmonaire idiopathique queri par splenectomie, Helvet. Pediat. acta, 7:501-507, November 1952.

9. Elgenmark, O., and Kjellberg, S. R.: Hemosiderosis of the lungs—typical roentgenological findings, Acta radio, 29:32-36, 1948.

10. Fleischner, Felix G., and Berenberg, Arnold L.: Idiopathic pulmonary hemosiderosis, Radiology, 62:522-526, April 1954.

11. Gellis, S. S., Reinhold, J. L. D., and Green, S.: The use of aspiration lung puncture in the diagnosis of idiopathic pulmonary hemosiderosis, A.M.A. J. Dis. of Children, 85: 303-307, March 1953.

12. Gluck, E.: Idiopathic pulmonary haemosiderosis. Report of a case, with special regard to the pathogenesis, Acta Path. et Microbiol. Scand., 37:241-251 (Fasc. 3), 1955.

13. Gurewich, V., and Thomas, M. A.: Idiopathic pulmonary hemosiderosis in pregnancy. Report of a case suggesting early pulmonary hemosiderosis with clinical recovery after steroid therapy, N.E.J.M., 261:1154-1159, December 3, 1959.

14. Irvin, J. M., and Snowden, P. W.: Idiopathic pulmonary hemosiderosis; report of a case with apparent remission from cortisone, A.M.A. J. Dis. Child., 93:182-187, February 1957.

15. Kushner, D. S., and Szanto, P. B.: Diagnostic problems. Hemolytic and hypochromic anemia and elevated cold agglutinin titer in a seven-year-old child, J.A.M.A., 168: 1013-1018. October 1958.

16. Propst, A.: Morphologie und Pathogenese der Essentielden Lungenhaemosiderose, Virchows Archiv fur Pathologische Anatomie und Physiologie, 326:633-663, 1955.

17. Russi, S., and Wingo, C. F.: Idiopathic pulmonary hemosiderosis, Am. J. Path., 32:611, May-June 1956.

18. Sandoe, E.: Essential pulmonary haemosiderosis; account of two cases, one treated experimentally with ACTH, Danish M. Bull., 1:175-179, November 1954.

19. Schaar, F. E., and Rigler, L. G.: Idiopathic pulmonary hemosiderosis; essential brown induration of lung; report of case and review of literature, Journal-Lancet (Minn.), 76:126-134, May 1956.

20. Schoeniger, E. L., Tucker, A. S., and Bolande, R. P.: Idiopathic pulmonary hemorrhage with hemosiderosis and microcytic anemia, Radiology, 70:191-195, February 1958.

21. Smith, W. E., and Fienberg, R.: Early nonrecurrent idiopathic pulmonary hemosiderosis in an adult; report of a case, N.E.J.M., 259:808-811, October 1958.

22. Soergel, K. H.: Idiopathic pulmonary hemosiderosis; review and report of two cases, Pediatrics, 19:1101-1108, June 1957.

23. Steiner, B.: Essential pulmonary haemosiderosis as an immuno-haematological problem, Arch. Dis. Child., 29: 391-397, October 1954.

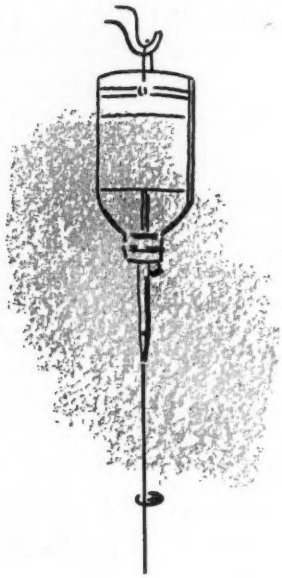
24. Virchow, R.: Die Krakhaften Geschwulste, Berlin Aug. Hirshwald, Part 2: 1864 Monograph.

25. Waldenstrom, J.: Relapsing, diffuse, pulmonary bleedings or hemosiderosis pulmonum—a new clinical diagnosis, Acta Radiol., 25:149-162, 1944.

26. Walton, M., and Williams, A. A.: Idiopathic pulmonary haemosiderosis. Report of a case in an adult, Brit. M. J., 2:390-391, Aug. 18, 1951.

27. Wylie, W. G., Sheldon, W., Bodian, M., and Barlow, A.: Idiopathic pulmonary haemosiderosis (essential brown induration of the lungs), Quart. J. Med., 17:25-48, January 1948.

28. Wynn-Williams, N., and Young, R. D.: Idiopathic pulmonary haemosiderosis in adult thorax, 11:101-104, June 1956.



Choledocholithiasis

Correlation of Preoperative with Operative and Postoperative Data to Enhance Diagnostic Insight

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• One hundred cases of common bile duct explorations were reviewed in an attempt to obtain information that might give insight into the diagnosis and definitive treatment of choledocholithiasis. Fifty of the hundred patients had common duct stones. Correlations were made between the incidence of choledocholithiasis as proved at operation, and the following factors: Kind and number of choledochal exploratory criteria used, the clinical diagnosis of common duct stones, and the pathologic features of gallbladders removed.

The incidence of stones was statistically related to aging.

The most frequent choledochal exploratory criteria were common duct dilatation or thickening (63 cases) and history of jaundice (50 cases).

The most reliable single criterion in "diagnosing" common duct stones was palpable common or hepatic duct stones, the diagnosis having been correct in 15 of 17 such cases.

The most reliable combination of criteria was a history of jaundice, plus palpable stones, with correct diagnosis in all such cases.

The clinical diagnosis of choledocholithiasis was correct in only 17 per cent of cases.

The correlation of the incidence of common duct stones with the degree of gallbladder disease—that is, acute or chronic—did not provide information that might be helpful in diagnosing choledocholithiasis.

The incidence of proven retained common duct stones was 3 per cent, the non-fatal postoperative complication rate was 21 per cent and operative mortality was 1 per cent.

ALTHOUGH the first successful exploration of the common bile duct was carried out almost 70 years ago,[6] the problems of surgical operations on the biliary ducts are still perplexing, and of considerable importance. Examining the theories and facts concerning diseases that necessitate exploration of the common bile duct may give additional insight into the diagnosis and effective treatment of common duct diseases.

The preoperative diagnosis of common bile duct stones, as every surgeon knows, can be most difficult, even in the presence of certain well-known signs. For example, painful jaundice, the supposed cardinal sign of the condition, may not always indicate common duct stones. Bartlett and Waddell[3] reported that of 382 patients with a history of jaundice, only 57 per cent had choledochal calculi at operation. A patient with definite history of chills and fever in recurrent cholangitis may be found not to have stones in the common duct. Certainly the type, the intensity and the areas of reference of postprandial biliary colic are helpful in diagnosis in only about half the cases. It has been shown, however, that chronic cholecystitis plus advancing age correlates well with choledochal stone incidence.

About 10 per cent of all patients with cholelithiasis have common bile duct stones.[6] Best (cited by Hicken and co-workers[9]) reported intrahepatic calculi in 7 per cent of cases. The reported incidence of choledocholithiasis with choledochostomy varies from 34 per cent (McLaughlin and Kleager, cited by Glenn[6]) to 83 per cent (O'Shea, cited by Strohl and co-workers.[17])

Definitive surgical cure of choledocholithiasis, with the frequent concomitant of cholecystitis, is often difficult. In an appreciable proportion of patients, choledochostomy for suspected calculi is fraught with such complications as stricture of the common bile duct, external or internal biliary fistulae and "postcholecystectomy syndrome." In addition, common duct stones retained after choledochostomy present problems, and operative mortality may reach significant proportions.

Benign stricture of the choledochus is rare, and biliary fistula requiring definitive treatment occurs in less than 1 per cent of cases. The incidence of retained bile duct stones after choledochostomy is variously reported—at 3.3 per cent of 96 cases by McKittrick and Wilson,[14] at 11 per cent of 106 cases by Thomson[19] and at 20 per cent of 550 cases by Hicken and co-workers.[9]

The operative mortality for choledochostomy has been documented by Glenn[8] at 2.5 per cent (499 cases), and for choledochostomy plus cholecystectomy as 1.8 per cent (963 cases) by Bartlett and

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Quinby,[1] who also reported the incidence of nonfatal postoperative complications at 9.8 per cent. Finally, "postcholecystectomy syndrome" occurs with a frequency varying with the indications used for cholecystectomy.

How cholelithiasis comes about is not fully known. It appears that the consensus of evidence indicates a sequence of bile stasis, then bile concentration, precipitation of sediment and stone formation. Probably related to producing this sequence are factors such as diet, advancing age, obesity, biliary autonomic dysfunction and decreased liver function. Factors contributing to the development of cholecystitis include calculous obstruction of the cystic duct, bacterial cholecystitis (probably secondary) and "regurgitant" pancreatitis. Common bile duct stones are considered mainly of cholecystic origin, either as small calculi or as larger stones that have passed through a dilated cystic duct, or both.

In canine experimentation, Cole, Novak and Hughes[5] observed that partial obstruction of the cystic duct almost always brought about (in eight to ten months) chronic cholecystitis histologically identical to that of humans. A 6 per cent incidence of cholelithiasis was also noted. In a similar work, Picula and Dunphy[16] noted that cholelithiasis developed in five of thirteen animals after partial stenosis of the common bile duct with cellophane wrap. They noted also that the dogs not forming calculi did not have jaundice, but had relatively higher serum alkaline phosphatase than did the animals that did have stones. Imamoglu, Perry and Wangensteen,[11] using a different technique for choledochal stenosis, observed that cholelithiasis developed in seven of eight rabbits (in four to twenty-two weeks), only one of which had a slightly elevated serum bilirubin.

Acute cholecystitis was produced by cystic duct ligation and division in dogs that had a preoperative increase of cholic acid concentration due to 48 hours of fasting.[18] This bile concentration factor was reported in 1940 by Womack and Bricker (as cited by Cole, Novak and Hughes[5]), who said that bile concentrated to twice the normal amount produced acute cholecystitis, with occasional gangrene, when applied to gallbladder mucosa.

Some interesting etiologic factors concerning cholelithiasis have been reported in British literature by Horn.[10] Analyzing clinical cases of cholelithiasis (783 patients), he observed that in men the incidence of cholelithiasis increased with advancing age. Upon analysis of autopsy material (492 cases) it was noted that 52 per cent of men in the 80-90 age bracket had "asymptomatic" gallstones. In correlating data on age, marital status and parity in female clinical material, Horn noted that the highest incidence of calculi was in married multiparae under age 50, was next highest in married nulliparae and was least in single women. Interestingly, in married women over age 50 the incidence was higher in nulliparae than in multiparae. It was postulated that preclimacteric women have a greater incidence of cholelithiasis than of atherosclerosis, while in preclimacteric males the order is reversed. Horn expressed belief that hormonal factors play an important role in both diseases. Beyond age 50 there is a more equal incidence of cholelithiasis and atherosclerosis and a lessening of the disparity of incidence between the sexes.

The conjecture that diet may be an etiologic factor was shown to have some basis in fact by Morrison.[15] He reported the results of a ten-year controlled study of 100 patients on low-fat, low-cholesterol diets, the controls being 100 patients on unrestricted diets. The incidence of chronic cholecystitis was 1 per cent in the test group and 8 per cent in the control group. Three of eight of the patients in the control group had chronic cholecystitis proven at operation and all eight had cholecystographic evidence of disease. Furthermore, the control patients had evidence of depressed bile concentration of bile salts, plus elevated bile concentration of cholesterol, and elevated total blood cholesterol. Morrison postulated two mechanisms responsible for gallstone formation: (1) high-fat and cholesterol dietary intakes are associated with increased cholesterol content of bile and suppression of bile salt concentration, and (2) suppression of bile salt concentration in the bile causes precipitation of cholesterol and calcium bilirubin pigment, with the production of gallstones. These observations suggest a possible approach to the problem of prevention of biliary calculi.

PRESENT STUDY

Complete hospital records were reviewed of 100 consecutive private patients having common bile duct exploration at the Cottage Hospital, Santa Barbara, California, between 1949 and 1959. Operation was performed by 14 different general surgeons.

The correlations that were of concern in the study included: (1) relationship between age, sex, and common duct stone incidence, (2) correlation of preoperative diagnosis of choledocholithiasis with conditions observed at operation, (3) correlation between common duct stones, and certain pertinent clinical and laboratory data, (4) relationship between common duct calculi and the operative, gross and microscopic observations of the gallbladders and stones removed at operation.

An analysis of the following important factors was also done: retained common duct calculi, nonfatal postoperative complications, operative mortality and follow-up observation of patients.

TABLE 1.—*Criteria Used as Basis for Common Duct Exploration*

	Total (100 Cases)	Common Duct Stones Found (50 Cases)	Common Duct Stones Not Found (50 Cases)
1. Common duct dilatation and/or thickening	63	38	25
2. History of jaundice	50	26	24
3. Dilated cystic duct with/or without small stones	28	14	14
4. Palpable stones in common or hepatic ducts	17	15	2
5. Palpable "nodularity" in pancreas	18	8	10
6. Technical reasons	11	6	5
7. No reason given	1	1	0

TABLE 2.—*Numbers of Criteria Used as Basis for Common Duct Explorations*

	Total (100 Cases)	Common Duct Stones Found (50 Cases)	Common Duct Stones Not Found (50 Cases)
One criterion	41	13	28
Two criteria	34	19	15
Three criteria	18	12	6
Four criteria	6	5	1
No criteria stated	1	1	0

TABLE 3.—*Additional Clinical and Laboratory Data*

	Total (100 Cases)	Common Duct Stones Found (50 Cases)	Common Duct Stones Not Found (50 Cases)
1. History of biliary colic	89	46	43
2. History of chills and fever	13	8	5
3. WBC count above 10,000	24	9	15
4. Icterus (laboratory)	27	15	12
5. Elevated serum amylase	6	3	3

RESULTS

Of the 100 patients, 66 were women and 34 men. The age range was 19-84. Seventy-three patients were over and 27 were less than 50 years of age.

Each of the hundred patients underwent choledochostomy, and 91 had cholecystectomy at the same operation. Of the remaining nine two had had previous cholecystectomy (one of them three weeks and the other four months before), three had cystic duct remnants, two had had previous cholecystectomy (two weeks, and three weeks before), plus primary choledochostomy at other hospitals, one had had a previous cholecystostomy (three weeks before) and one had had cholecystostomy plus gallbladder biopsy and choledochostomy.

Fifty of the patients had common duct stones at the time they were first operated on. Fifty-six per cent of the women and 38 per cent of the men had choledocholithiasis. There was a proportional relationship between the incidence of common duct calculi and advancing age in both sexes.

Correlating of the preoperative diagnosis of common duct stones with the observation of common duct stones at operation showed correct preoperative diagnosis in 17 cases. This diagnosis had been entertained as a possibility in other cases, of course. In seven of the 100 cases choledocholithiasis was incorrectly diagnosed before operation.

Table 1 summarizes the relationship between the indications on which operation was done and the conditions observed at choledochotomy. From one to four different criteria for exploration were present in all patients who had operation. For example, although 63 of the 100 patients had the criterion of dilatation, and/or thickening of the choledochus, 25 of them did not have common duct calculi. Of 50 patients having a history of jaundice, common duct stones were found in 26. Twenty-eight patients had dilated cystic ducts at operation, and no attempt was made to further subdivide them by putting those who also had small gallbladder stones in one group and those who did not in another. Of the 17 patients with palpable stones in the common or hepatic ducts, 15 actually had choledocholithiasis at exploration, which, however, was only 30 per cent (15 out of 50) of the number who had choledocholithiasis. An expected proportion of patients had palpable nodularity in the head of the pancreas. The criterion of "technical reasons" (Table 1) included the following: in three cases, cystic duct remnants; in three others, strictures of the common duct; and in one case each, external biliary fistula, a palpable "nodule" in the triangle of Calot, postoperative common duct laceration, anomalous hepatic ducts, and calculus demonstrated on operative cholangiography. In one case no indication was evident on a reading of the chart, although a common duct stone was found.

On grouping the cases (Table 2) according to whether there were one, two, three or four criteria for choledochal operation, it was noted that in 28 of 42 cases in which there was a but a single "reason" for common duct exploration, stones were not found in the choledochus. But progressively as the number of criteria for operation increased, the proportion of cases with stones also increased. In five of six cases in which there were four criteria, stones were present.

Pertinent clinical and laboratory data are shown in Table 3. Eighty-nine of the 100 patients had a history interpreted as definite for biliary colic. Twenty-seven were jaundiced on hospital admission and laboratory studies corroborated the observation. Twelve of the 27, however, did not have stones in the common duct.

TABLE 4.—Correlation of Clinical Diagnosis of Choledocholithiasis with Operative Diagnosis

Clinical diagnosis made and common duct stones found	17 of 50 cases (34 per cent correct)
Clinical diagnosis made and common duct stones not found	7 of 50 cases (14 per cent correct)

TABLE 5.—Correlation of "Positive" Choledochotomy (Common Duct Stones Found) with Pathologic State of Gallbladder (50 Cases)

Acute Cholecystitis Group (6 total)	
Acute inflammation with stones	4
Sub-acute inflammation with stones	1
Acute inflammation with recent perforation	1
Chronic Cholecystitis Group (43 total)	
Chronic inflammation with stones	36
Acute and chronic inflammation with stones	3
Chronic inflammation without stones	2
Chronic inflammation plus cholesterolosis with stones	1
Cholesterolosis	1
Other Disease	
Chronic inflammation of cystic duct remnant	1

TABLE 6.—Correlation of "Negative" Choledochotomy (Common Duct Stones Not Found) with Pathologic State of Gallbladder (49 Cases)*

Acute Cholecystitis Group (5 total)	
Acute inflammation with stones	3
Acute inflammation without stones	2
Chronic Cholecystitic Group (42 total)	
Chronic inflammation with stones	33
Acute and chronic inflammation with stones	4
Chronic inflammation without stones	3
Chronic inflammation plus cholesterolosis with stones	2
Other Disease	
Acute inflammation of cystic duct remnant	1
Chronic periductal inflammation of cystic duct remnant	1

*Pathologic report not available in one case.

Correlation of the clinical diagnosis of choledocholithiasis with the operative diagnosis is shown in Table 4.

Next, the relationship between choledocholithiasis and pathologic studies of the gallbladder (gross and microscopic, after cholecystectomy) was analyzed. A final pathologic report was available in 99 cases. Certain histologic material was reviewed, when indicated.

According to the conditions observed at pathologic study of the gallbladders or cystic duct remnants removed at operation, the cases were classified in three groups—acute cholecystitis, chronic cholecystitis and "other disease." The incidence of these classifications in the patients who had stones and in those who did not have stones was about equal. (Tables 5 and 6.)

The types of stones found and the number of cases for each type were: cholesterol, 13; pigment, 13; mixed type, 12; 1 to 2 mm. "sand," 6; not reported, 6.

TABLE 7.—Data on Retained Common Duct Stones After Operation

Cholangiogram Diagnosis (Minimally suspected)		11
Clinical and Cholangiogram Diagnosis		
Proven or strongly suspected		6
Proven at second choledochotomy	3	
Biliary flush treatment (stone apparently passed)	2	
0.6 cm. stone found in T-tube tract at second choledochotomy (equivocal common duct stone)	1	

TABLE 8.—Postoperative Complications (100 cases, 1 to 30 Days), Exclusive of Retained Common Duct Stones

1. Bile drainage around T-tube	8
2. Wound infection	5
3. Hemorrhage	2
4. Bile peritonitis	2
5. Jaundice	1
6. Other—	
Wound dehiscence	1
Right pleural effusion	1
Acute pancreatitis secondary to diodrast cholangiogram	1
Total	21

The problem of retained stones assumed significant proportions. It should be mentioned that in 97 of the 100 cases, an indwelling T-tube was placed in the common bile duct. (In one it was placed in the right hepatic duct, and in one case choledochoduodenostomy also was done.) In most cases without complications the tubes were left in place postoperatively seven to ten days. In two cases straight rubber catheters were sewn in, and one patient had a cholecystostomy drainage tube. Eighty-two patients had T-tube cholangiographic examination during and/or after operation. Patients having evidence of retained choledocholithiasis (Table 7) were divided into two groups: (1) those having only cholangiographic indication of a possible stone (minimally suspected), and (2) those having both cholangiographic and clinical evidence of retained stone (strongly suspected or proven). There were 11 in the former group, and in most of these cases there probably had been intra-ductal air bubbles that made roentgenologic interpretation equivocal. None of these patients was reoperated upon, and all were discharged with satisfactory recovery. There were six cases in the latter group, in three of which reoperation was done and retained stones were found (two within two weeks, and one at three and a half months). In two of these common duct stones were found at the first operation. Of the remaining three patients, two had persistent cholangiographic evidence of a retained stone, and were treated conservatively with a biliary flush regimen, with apparent passage of the calculus and one had four chole-

TABLE 9.—*Data on Mortality and Results of Operation*

Hospital death—	
Pulmonary embolus	1
Delayed death—	
Bile peritonitis at 2 months	1
Biliary cirrhosis at 8 months	1
Death, unrelated causes	14
Patient follow-up, 2 to 11 years (64 cases)—	
Excellent results	66 per cent
Good results	26 per cent
Poor results (including retained common duct stones)	8 per cent

dochal calculi (2 to 3 cm.) at initial operation, and a 0.6 cm. stone was found outside the common duct in a fistulous tract (significance equivocal).

Non-fatal postoperative complications (exclusive of retained common duct stones) occurred in 21 cases (Table 8). The commonest complications were: bile drainage around the T-tube (moderate to profuse)—eight cases, and wound infection—five. No postoperative abdominal abscesses were recorded.

Mortality data and information on patients who were observed for varying periods after operation are given in Table 9. The operative death was due to an unexpected massive pulmonary embolus in a 44-year-old man 12 days postoperatively. Operation had been performed for chronic cholecystitis with stones, and the common duct contained "many" mixed stones up to 1 cm. in diameter. There had also been profuse biliary fistulous drainage around the T-tube before he died. In addition, there were two delayed postoperative deaths, both the result of benign biliary tract complications, one at two months, and one at eight months after operation. The patient who died two months after operation was a 59-year-old woman, who had had a second operation because of a laceration of the choledochus, external biliary fistula, and sub-hepatic abscess. Death was due to bile peritonitis and inanition. The other patient was a 69-year-old woman with chronic cholecystolithiasis and clinical jaundice. Stones had not been found at choledochotomy. Death was due to progressive biliary cirrhosis.

Results in the 73 patients who were observed for periods of two to eleven years were classified as excellent in 66 per cent, good in 26 per cent (with occasional distressing symptoms) and poor in the remainder (retained common duct stones, recurrent postoperative jaundice or severe symptoms).

DISCUSSION

The problem of the validity and relative reliability of choledochal exploratory criteria is one to be reckoned with. Surgeons are probably not justified in exploring every common duct on the basis of any single criterion. Each operative case merits individual decision for choledochal exploration based upon the aggregate of factors found, which will necessarily include appraisal of the operative risk in each case, complicating anatomic factors observed at operation and the number and kind of exploratory criteria observed at the operating table.

As shown in Table 1, our exploratory criteria were six in number. Although dilatation or thickening of the common bile duct was the most frequent exploratory criterion observed (in 63 of 100 cases), it was not as "reliable" as the less frequent criterion of palpable common duct stones (in 17 of 100 cases) in "diagnosing" the actual presence of calculi before choledochotomy. By calculation, the latter criterion was "correct" 88 per cent of the time (in 15 of 17 cases), while the former criterion was 60 per cent reliable (in 38 of 63 cases). History of jaundice and of dilated cystic ducts were both about 50 per cent reliable in this respect. Nodularity in the ampullary-pancreas region was only 44 per cent reliable as an index to the presence of choledocholithiasis.

Regarding the relatively low incidence of palpable common duct stones (15 of 50 cases in which stones were present), it would seem that this should be more frequently observed with careful inspection of the extra-hepatic ductal system. Even so, stones were palpated in the present series in a much higher proportion of cases than the 10 per cent reported by Bartlett and Waddell[3] in a series of 900 cases. The reason for these low incidences is not readily apparent.

The use of the bromsulfalein retention test and the serum alkaline phosphatase test has been found to be valuable in the diagnosis of common duct stones. Culver, McDermott and Jones[4] reported that the differential excretory gradients of these two laboratory indices are a diagnostic aid in problem cases where there is partial biliary obstruction. But even the presence of icterus or a history of it is no guarantee that calculi will be found at choledochostomy. In six of the cases in the present series this singular criterion was the basis for ductal exploration, and no stones were found. Bartlett and Waddell reported the combination of a history of icterus and palpable stones at the operating table was 99 per cent reliable as criterion for choledochal exploration. In the present series this combination was observed in nine cases and in all of them common duct stones were found.

From the foregoing it may be concluded that the kind of criteria used is of more importance than the total numbers of criteria observed. This is attested by data in Table 2, where it may be seen that in 7 of 24 cases having three or more exploratory criteria (without regard to kind) no common duct stones were found.

The reason for our correlation of data on common duct stone incidence with the nature of the pathologic observations on examination of the gallbladder was to answer the question: Which patient is more likely to have common duct stones, one with acute or one with chronic cholecystitis? Admittedly, the series was small, and 73 of the 100 patients were over 50 years of age—hence more likely to have chronic biliary tract disease. Nevertheless the fact that the incidence of the acute disease and of chronic disease was about the same in patients who had common duct stones as in those who did not can be taken as indicative that acuity of disease is not a factor that can be helpful in diagnosing choledocholithiasis. Unfortunately, the clinical diagnosis of choledocholithiasis also was unreliable, since it was correct in only 17 of 50 cases.

We believe that it should be possible to remove all stones present at operation, yet in our series there was retention of stones proven in three cases at a second operation, which corresponds to the incidence reported in 1949 by McKittrick and Wilson[14]—3.3 per cent of 96 cases in which choledochotomy was carried out. The Kirby-Thurston cholelithophone may prove of some value[12] in reducing the frequency of this complication.

No satisfactory explanation is offered for the rather high incidence of bile drainage around the indwelling T-tube in the present series (Table 8). In five of the eight cases in which this occurred the patients had had common duct stones. Other nonfatal postoperative complications in the series did not appear excessive.

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REFERENCES

1. Bartlett, M. K., and Quinby, W. C., Jr.: Surgery of the biliary tract I, mortality and complications of cholecystectomy and choledochostomy for chronic cholecystitis, N.E. J.M., 254:154-56, Jan. 26, 1956.

2. Bartlett, M. K., and Quinby, W. C., Jr.: Surgery of the biliary tract III, secondary operations on the common bile duct, N.E.J.M., 256(1) :11-15, Jan. 13, 1957.

3. Bartlett, M. K., and Waddell, W. R.: Indications for common duct exploration. Evaluation in 1,000 cases, N.E. J.M., 258(4) :164-67, Jan. 23, 1958.

4. Culver, P. J., McDermott, W. V., and Jones, C. M.: Diagnostic value of selective interference with certain excretory processes of the liver, Gastroent., 33:163-68, 1957.

5. Cole, W. H., Novak, M. V., and Hughes, E. O.: Experimental production of chronic cholecystitis by obstructive lesion of the cystic duct, Ann. Surg. 114(4) :682-96, Oct. 1941.

6. Glenn, F.: Common duct exploration for stones, Surg., Gynec. & Obst., 95:431-38, 1952.

7. Glenn, F., and Mannix, H.: The acalculous gallbladder, Ann. Surg., 144:670-80, 1956.

8. Glenn, F.: A 26-year experience in the surgical treatment of 5,037 patients with nonmalignant biliary tract disease, Surg., Gynec. & Obst., 109(5) :591-606, Nov. 1959.

9. Hicken, N. F., McAllister, A. J., and Call, D. W.: Residual choledochal stones, A.M.A. Arch. Surg., 68:643-56, May, 1954.

10. Horn, G.: Observations of the aetiology of cholelithiasis, Brit. Med. J., #4995:732-37, Sept. 29, 1956.

11. Imamoglu, K., Perry, J. F., and Wangensteen, O. H.: Experimental production of gallstones by incomplete stricture of the terminal common bile duct, Surgery, 42(4) :623-30, Oct. 1957.

12. Kirby, C. K.: Instrument for the detection of gallstones in the bile ducts, Am. J. Surg. 80:133-35, 1950.

13. Kozill, D. D., Dwyer, G., and Meyer, K. A.: Pathologic correlation of gallstones, A.M.A. Arch. Surg., 79(3) : 514-36, Sept. 1959.

14. McKittrick, L. S., and Wilson, N. J.: Indications for and results following exploration of the common bile duct for stones, Calif. Med., 71(2) :132-37, 1949.

15. Morrison, L. M.: The effects of low fat diet on the incidence of gallbladder disease, Am. J. Gastroent., 25(2) : 158-63, Feb. 1956.

16. Picula, J. V., and Dunphy, J. E.: Some effects of stenosis of the terminal common bile duct on the biliary tract and liver, N.E.J.M., 260(7) :315-18, Feb. 12, 1959.

17. Strohl, E. L., Diffenbaugh, W. G., and Guynn, V.: Symptoms of common duct stones, A.M.A. Arch Surg., 64: 788-93, 1952.

18. Thomas, C. G., and Womach, N. A.: Acute cholecystitis; its pathogenesis and repair, A.M.A. Arch. Surg., 64: 590-600, May 1952.

19. Thomson, F. B.: Residual stone in the biliary ducts, Surg., Gynec., & Obst., 78-84, July 1956.

20. Thorbjarnarson, B., Glenn, F., and Pearce, C.: Calculous disease of the biliary tract, A.M.A. Arch. Surg., 79: 939-50, Dec. 1959.

The Aminase Oxidase Inhibitors

Their Current Place in Clinical Medicine

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• **Development of the MAO-inhibitors has been an important advance in the treatment of tuberculosis, mental depression, several of the collagen diseases, hypertension and angina pectoris. Treatment must be carefully controlled and individualized. A sufficient number of MAO-inhibitors is available at present to afford ready and correct selection of the proper one for a given patient and disease. Provided such care is observed, treatment is most successful and side effects are few and, as a rule, readily corrected.**

SINCE 1952 when Zeller and others[10] described the pronounced inhibition of monoamine oxidase by iproniazid, this substance and its analogues have been used in the treatment of a wide variety of conditions. In a number of these, there is understanding of some of the biochemical and pharmacologic actions which occur, but in others we cannot as yet rationally explain why improvement appears. In this communication we shall briefly summarize present knowledge of these drugs and relate some of our experiences with them in the treatment of angina pectoris. We shall discuss only those monoamine oxidase inhibitors (MAO-inhibitors) which are hydrazine derivatives.

Although these agents are known to exert their effects on enzymes other than monoamine oxidase (e.g., diamine oxidase), most of our knowledge stems from studies of monoamine oxidase. This substance is contained primarily in cell mitochondria and has been found in most tissues of the body. It is apparently inhibited by the alkylhydrazine component of the inhibitors,[11] permitting build-up of some of the amines and potentiation of their effects. Interference with the liver enzymes which ordinarily detoxify certain drugs causes the action of these drugs, too, to be prolonged.[2]

The biochemical and pharmacologic results of amine oxidase inhibition may be summarized briefly as follows:

(a) *Serotonin metabolism:* Brain serotonin levels are increased by the administration of these agents, the highest level usually being attained 3 to 5 hours after administration; repeated administration of the inhibitors does not raise brain levels over those achieved with a single dose. No increase of serotonin can be demonstrated in the blood, stomach or intestines after use of iproniazid.

(b) *Epinephrine and norepinephrine:* Apparently the primary effects of the MAO-inhibitors (as exemplified by iproniazid) are not on these two amines but on their metabolites, as demonstrated by reversal of the normal urinary excretion ratio of the metabolites of methyl-labeled epinephrine. The inhibitors apparently exert their effect on the products of O-methylation of these amines.

(c) *Adrenochrome and adrenolutin metabolism:* It has been noted that patients who suffer from anxiety or tension destroy adrenochrome more rapidly than do normal subjects. Following administration of adrenochrome and adrenolutin, anxiety steadily decreases. It is thought possible, therefore, that some of the euphoria noted in patients receiving iproniazid may be related to a diversion of epinephrine or methoxyepinephrine to adrenochrome or its derivatives.

(d) *Effects on other amines:* Other amines which are affected by monoamine oxidase inhibition include dopamine (which may play a more important role in the action of monoamine oxidase inhibition than does serotonin), tyramine and tryptamine. The last, which lacks a major alternate pathway of breakdown, accumulates in large amounts following monoamine oxidase inhibition, and urinary tryptamine excretion increases. This reflects monoamine oxidase inhibition throughout the body and hence affords a relatively simple measure of such inhibition.

The MAO-inhibitor used most widely has been iproniazid, initially employed for bacteriostatic and bactericidal effects on the tubercle bacillus. It soon became apparent that the large dose needed for effective control is accompanied by a high incidence of side-effects. Iproniazid was noted to cause weight gain in emaciated and debilitated patients, relief of pain, reduction of local edema and heat, and reduction in body temperature. It was also observed that the tendency toward wound healing of mesodermal tissues is out of proportion to any influence

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of the chemical on the tubercle bacillus alone. Finally, it was seen that in these patients depression was replaced by mood elevation. In the eight years since the first observations were published, hundreds of MAO-inhibitors have been synthesized. Attempts have been made to modify the chemical structure of these preparations in such a manner that the primary effects are directed toward the brain, the heart or other organs. The agents which are now commercially available are listed in Table 1, together with their customary initial and maintenance doses. An additional agent not yet commercially available, pivalylbenzhydrazine, is included in the table.

TABLE 1

Compound	Average Daily Dose (mg)	Range of Daily Dose (mg)
Iproniazid (Marsilid®)	50	10-150
Isocarboxazid (Marplan®)	15	10- 30
B-Phenylisopropylhydrazine (Catron®)	12.5	9- 25
Phenelzine (Nardil®)	45	Up to 120
Nialamide (Niamid®)	75	Up to 150
Pivalylbenzhydrazine (Tersavid®)	75	50-200

In complete contradistinction to the others noted here, pivalylbenzhydrazine does not have any mood-alleviating effect in the vast majority of patients.[9] This has proved to be of considerable value in our understanding of the mechanisms and uses of these drugs.

At present, the monoamine oxidase inhibitors are employed in the treatment of tuberculosis of all kinds, in the psychiatric treatment of hypoactive and depressed patients, in angina pectoris, in a miscellany of gastrointestinal disturbances, and in rheumatoid arthritis, rheumatoid spondylitis, lupus erythematosus, systemic sclerosis, Raynaud's phenomena, dermatomyositis, narcotic addiction, acne vulgaris and psoriasis, and in the pain of malignant disease. Multiple sclerosis has been reported to worsen under iproniazid treatment.

Our particular interest in the use of these compounds has been in the treatment of angina pectoris. Because the efficacy of such therapy is difficult to evaluate, the various factors to consider in the alleviation of this pain with the MAO-inhibitors may include psychic effects, effects on the pain threshold, central nervous system stimulation, ganglion-blocking effects, analgesic effects, oxygen-sparing effects and coronary artery dilation.

The most obvious effect to consider in the use of agents that are powerful mood elevators, would be psychic effect. Undoubtedly this is important, but it has been shown in some studies that effects are greater by far with the use of the MAO-inhibitors than with placebos. Also, we have achieved relief of angina pectoris not only by use of isocarboxazid, which is a mood elevator, but also with pivalylbenzhydrazine, which has little or no effect upon mood. It would appear that while psychic effect undoubtedly is involved, this is not the most important or even a major factor in the anti-anginal action of these drugs.

Associated with the psychic effect is the possibility of raising the pain threshold of a specific patient. Although this may be related to the antidepressant activity of these agents, in view of the factors already noted, it would not appear likely that this is a major factor.

Several of the MAO-inhibitors have been shown to possess analgesic activity up to the efficacy of codeine.[1] Although this analgesic activity may be important under certain conditions, particularly when mesenchymal tissues are involved, we do not feel that it is the most important factor in the effects of these agents in prophylaxis against angina pectoris.

As important or more important than the analgesic effect is central nervous system stimulation. The feeling of well-being and increased drive that these patients frequently obtain certainly is related to central nervous system stimulation. Many of the patients we have treated have been impressed with the fact that they did not realize some degree of depression was present until they had received these drugs and observed improvement.

Because many of the side effects in the use of monoamine oxidase inhibitors resemble those due to ganglion-blocking agents, it has been postulated that part of the effect of the monoamine oxidase inhibitors in relieving angina may be attributed to ganglionic block. It has been found, however, that the inhibitors block ganglia only if perfused directly through isolated ganglia and not otherwise.[3]

Severe infarct-like myocardial necrosis has been observed to follow the use of epinephrine and norepinephrine in man and animals. This necrosis probably is due to increased oxygen consumption and drop in blood pressure under these conditions. In animals that have been pre-treated with isocarboxazid and then have received intraperitoneal injection of isopropylarterenol, necrosis is much less severe. This has been interpreted as evidence of an oxygen-sparing effect, probably related to interference in some oxidative processes.[12]

One final pathway of investigation is that of possible coronary dilation. This has been shown to occur both in the isolated heart and in the intact animal. Several circumstances make it unlikely that coronary dilation is of great significance in the clinical use of these agents. In the first place, the pain that is

relieved in these patients is chronic, and it is difficult to visualize how the periods of brief coronary dilation demonstrated in experimental procedures can benefit a chronic condition. Also, it is difficult to see how the calcified vessels of patients with far advanced coronary arteriosclerosis can be dilated.

As far as the cardiovascular effects of the MAO-inhibitors are concerned, the most significant clinical considerations to date have been in relation to blood pressure, peripheral vascular disease and the anginal syndrome.

The MAO-inhibitors are known to lower blood pressure. In view of the dangers of physical injury from falls attributable to hypotension, especially in elderly persons, there has been some tendency to withhold these agents. In addition, there is the possibility of precipitation of cerebrovascular accidents secondary to hypotension. It is evident that clinicians will be divided, those who will withhold the agent because of possible bad effects, and those who will administer it for its benefits. We agree in general with the second group and do not hesitate to use these agents where indicated, although cautiously, despite the presence of cerebrovascular disease.

It has been suggested[8] that these agents may be contraindicated in patients with low blood pressure. In our experience not often is there a significant drop in blood pressure provided the patients are treated cautiously and conservatively and if, in patients of this particular type, the drug is given by gradually increasing doses, starting at low levels and working up to therapeutic effect. Pivalylbenzhydrazine has not been observed to cause orthostatic hypotension in any of our patients.

These drugs have had a trial as anti-hypertensive agents, both alone and in combination with diuretics, notably chlorothiazide. The results have been good in general, and studies reported[4,5,6,8] have indicated that significant hypotension may occur, both orthostatic and supine. These effects are so striking that the dosage of other anti-hypertensive medication must be greatly reduced while taking the MAO-inhibitors in order to maintain safe blood pressure levels. With this combined therapy, the MAO-inhibitor may permit continual control with once-a-day dosage and thus some of the side effects seen with ganglioplegic agents can be avoided.

The response of patients with intermittent claudication has been somewhat contradictory. In some instances benefit has been observed, in others not. As a rule, patients are able to walk farther but eventually they reach the limit of their tolerance and have a return of pain. Tests of pedal circulation do not show improvement with these preparations. In addition, an interesting phenomenon has been observed: Patients with angina pectoris who have not had intermittent claudication before taking these agents may develop these painful spasms, without any change in blood pressure taking place, simply because once they are relieved of angina pectoris they can walk greater distances than they could before, and they overdo.

The MAO-inhibitors diminish both the intensity and frequency of anginal pain and increase the capacity for exertion; they have been used widely during the past several years, therefore, in the treatment of this condition. We have used iproniazid, isocarboxazid, pivalylbenzhydrazine and, with Dr. Willard J. Zinn, beta-phenylisopropylhydrazine. Our results agree in general with most of those published in the literature. Our patients felt better with medication than they felt before—were more alert, more cheerful and had greater tolerance for activity. Many of them were able to remain gainfully employed or to return to jobs they previously had had to quit.

There is some question as to whether these agents merely afford symptomatic relief, or whether they actually cause an increase in efficiency of the heart muscle. We have already discussed several factors which may be operative.

It is difficult to determine whether the analgesic activity of these compounds is most important, or whether the anti-anginal effect may be due specifically to the rise in pain threshold, to central nervous system stimulation or to psychic effects. The exact role of coronary dilation or oxygen-sparing effects also is uncertain. When these agents were first used, it was believed that the entire anti-anginal effect was owing to the anti-depressant factor, but the development of inhibitors which depressed or had no effect on drive and activity indicates that the psychic element may not be as important as had been thought.

The problem of acute myocardial infarction during MAO-inhibitor therapy must be considered. There is some possibility that masking angina may induce patients to exceed the limits imposed by the circulation to the myocardium, but we know of no patients in our series who have had myocardial infarction so caused. Theoretically, the use of these drugs may improve the chances of survival after myocardial infarction. This concept is based first on the oxygen-sparing effect discussed earlier, and second on the evidence that these agents have an anti-arrhythmic action which may protect against the development of disastrous ventricular arrhythmia during the stage of acute myocardial infarction.[5]

Our own experience has been greatest with isocarboxazid and pivalylbenzhydrazine: isocarboxazid is a potent anti-depressant agent; and pivalylbenzhydrazine has little or no anti-depressant effect. Twenty-five patients were treated with isocarboxazid and 45 with pivalylbenzhydrazine. Results were sim-

ilar in the two groups. Roughly 75 per cent in each group had some benefit—excellent in approximately 30 per cent, good in 40 per cent and fair in about 5 per cent. The patients in each group were of comparable age distribution. Most had coronary arteriosclerosis with angina pectoris, and a few had aortic valvular disease, either insufficiency or stenosis. We were able to differentiate very clearly in several instances those patients whose angina was induced primarily by psychic stimulation and those who had pain only on physical effort. We were thus able to select the MAO-inhibitor in a rational manner, with gratifying relief of angina.

Side effects during MAO-inhibitor therapy are frequent. Fortunately, most are not serious and are readily avoided or controlled.

The only significant side effect we observed among our patients was the occurrence of severe orthostatic hypotension in several patients receiving iproniazid and one who received isocarboxazid. Where needed for immediate effect, methoxamine was used with benefit. Good results were obtained with cortisone, hydrocortisone or adrenocorticotropin (ACTH). Slight hypotension was controlled by the concomitant administration of amphetamine or amphetamine-like compounds. In none of the patients we treated with pivalylbenzhydrazine did orthostatic hypotension develop.

The development of jaundice or hepatitis has been reported as an infrequent, serious and, on occasion, fatal complication. We did not see it in our patients. Serial studies of hepatic function occasionally showed values outside the normal range, but no more frequently than similar values appeared in tests of hepatic function in patients who were not taking MAO-inhibitors. Without exception the values returned to within normal range during continued therapy.

Among the other complications described are a group of symptoms which has not been a serious problem to us. Included are agitation, periorbital or dependent edema, bladder or bowel dysfunction, hyperreflexia and hyperkinesis or muscle fasciculations, peripheral neuritis (we have not seen this), both increases and decreases in sexual potency and activity, and weight gain. Correction of doses, change to another inhibitor or simple symptomatic treatment generally relieves these symptoms.

Serial laboratory studies including complete blood cell count, urinalysis and hepatic function studies revealed no significant changes in our patients, several of whom were observed for as long as two years.

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REFERENCES

1. Emele, J. F., Shanaman, J. E., and Warren, M. R.: Analgesic activity of monoamine oxidase inhibitors, Fed. Proc. 18:387, 1959.

2. Fouts, J. R., and Brodie, B. B.: On the mechanism of drug potentiation by iproniazid (2-isopropyl-1-isonicotinyl hydrazine), J. Pharmacol. & Exper. Therap., 116:480-485, April 1956.

3. Gertner, S. B.: Monoamine oxidase inhibitors and ganglionic block, Fed. Proc., 18:393, 1959.

4. Harnes, J.: The effect of Marsilid on blood pressure in hypertensive patients, J. Clin. & Exper. Psychopathol., 19 (Suppl. 1) :152, 1958.

5. Maxwell, M. H.: Monoamine oxidase inhibitors in hypertension; a review. Presented at the Symposium on Amine Oxidase Inhibitors, U. S. C. Postgraduate Div., Los Angeles, March 3, 1960.

6. Nussbaum, H. E., Leff, W., Mattia, V. D., and Hillman, E.: The effects of iproniazid phosphate (Marsilid) on hypertension, Angiology, 8:198, 1957.

7. Regelson, W., Hoffmeister, F. B., and Wilkins, H.: Effect of iproniazid on survival in the dog, following acute coronary occlusion, Ann. N. Y. Acad. Sci., 80:981-987, Sept. 17, 1959.

8. Schweizer, W., and von Planta, P.: Uber die Wirkung van Isopropyl-Isonikotin saure Hydrazid bei 100 Fallen von Angina Pectoris, Schwez. Med. Wachr., 36:882, 1958.

9. Voelkel, A.: Clinical experiences with amine oxidase inhibitors in psychiatry, Ann. N. Y. Acad. Sci., 80:680, Sept. 17, 1959.

10. Zeller, E. A., Barsky, J., Fouts, J. R., Kirchheimer, W. F., and Van Orden, L. S.: Influence of isonicotinic acid hydrazide (INH) and 1-isonicotinyl-2-isopropyl hydrazine (IIH) on bacteria and mammalian enzymes, Experientia, 8:349, 1952.

11. Zeller, E. A., Blanksma, L. A., Burkard, W. P., Pacha, W. L., and Lazanas, J. C.: *In vitro* and *in vivo* inhibition of amine oxidases, Ann. N. Y. Acad. Sci., 80:583, Sept. 17, 1959.

12. Zbinden, G., Randall, L. O., and Moe, R. A.: Clinical and pharmacological considerations on the mode of action of monoamine oxidase inhibitors, Dis. Nerv. System, 21: (Suppl., Sec. 2) 89-100, March 1960.

Snake Venom Poisoning in Southern California

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• **The annual incidence of rattlesnake bite in Southern California is approximately 1 per 75,000 population. The case fatality rate is 1.5 per cent. The snakes implicated in the greatest number of injuries are the southern Pacific rattlesnake, the red diamond rattlesnake and the sidewinder.**

Rattlesnake venom produces deleterious changes in the blood cells, defects in blood coagulation, injury to the intimal linings of vessels, damage to the heart muscle, alterations in the respiratory cycle and, to a lesser extent, changes in neuromuscular conduction.

The most frequently observed symptoms and signs following ophidiasis in this area are swelling and edema, pain, ecchymosis, swelling of the regional lymph nodes, weakness, sweating, increased body temperature, faintness, and hemorrhagic vesiculations. First aid treatment consists of immobilization of the affected part, application of a constriction band, incision and suction with subsequent local application of ice packs. Treatment in hospital consists of administration of antivenin, antitetanus agent and antibiotic. Transfusions, oxygen and a corticosteroid may be indicated in some cases.

APPROXIMATELY 50 rattlesnake bites are recorded each year among the nine million residents of the 11 Southern California counties.[11] The total number of bites by these animals in this area is not known but it would appear to be between 60 and 70 a year. The present fatality rate for recorded cases is 1.5 per cent. This figure substantiates that proposed by Klauber,[1] of probably less than 2 per cent. The rattlesnake is the only naturally occurring venomous snake in Southern California. Of the nine species and subspecies common to the area, the southern Pacific rattlesnake, *Crotalus viridis helleri*, the red diamond rattlesnake, *Crotalus ruber ruber*, and the sidewinder, *Crotalus cerastes laterorepens*, are implicated in the greatest number of injuries to human beings. Bites by nonvenomous reptiles are much more common than bites by rattlesnakes. The differentiation of venomous and nonvenomous snakebites has been reviewed by Pope and Perkins,[10] Klauber[2] and Oliver.[7]

The venom of the rattlesnake causes deleterious changes in the blood cells, defects in blood coagulation, injury to the intimal linings of vessels, damage to the heart muscle, alterations in the respiratory cycle and, to a lesser extent, changes in neuromuscular conduction.* The approximate lethal dose for man of the venom of the southern Pacific rattlesnake is estimated at 1.0 mg. of dried venom per kilogram of body weight. The average amount of venom milked from ten snakes of this species in this laboratory was 94 mg. when dried. Klauber[2] obtained an average of 112 mg. of dried venom from a total of 880 southern Pacific rattlesnakes, some of which were milked twice. The amount of venom a rattlesnake holds in reserve after an initial bite has been estimated to be between 25 and 75 per cent.[2]

Rattlesnake venom is a complex mixture, chiefly proteins, many of which have enzymatic activity. The lethal effects of the venom are probably due to the nonenzymatic proteins, although the enzymes and enzymatic combinations certainly contribute to the over-all toxicity of the venom. In addition to the separate and combined activities of these substances, and the metabolites formed by their inter-reactions, the envenomated victim may release several autopharmacologic substances which can render diagnosis and treatment of the victim more difficult.

Not all bites by rattlesnakes provoke symptoms or signs. In five of 22 cases observed by the author, there were no local or systemic manifestations. In three of these the snake's fangs had pierced the skin but had not entered the subcutaneous tissues. In these cases the venom had not been ejected or, if ejected, had not entered the wound. In two patients the fangs had entered the deeper tissues but no evidence of envenomation was apparent. Such incidents of rattlesnake bite without envenomation are well known.[8,9,18] The importance of this factor, and of others affecting the gravity of rattlesnake bites, have been reviewed by Klauber.[3]

SYMPTOMS AND SIGNS

The symptoms and signs following bites by rattlesnakes in Southern California are summarized in Table 1. Some essential differences were observed in the findings associated with the bites of different species. The bite of the western diamondback rattlesnake, *Crotalus atrox*, tended to cause more pain, edema, ecchymosis, hemorrhagic vesiculations, necrosis, hematemesis and hemolytic anemia than that

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*References 5, 11, 12, 13, 15, 17.

TABLE 1.—*Symptoms and Signs Following Rattlesnake Bites*

Symptoms and Signs	Author's Cases	Other Cases*
Fang marks	†22/22	†33/33
Swelling and edema	17/22	33/33
Pain	14/22	30/33
Ecchymosis	13/22	26/33
Swelling regional lymph nodes	11/12	7/8
Weakness	11/17	9/19
Sweating	10/17	5/12
Increase body temperature	9/17	10/23
Faintness or dizziness	8/17	7/14
Hemorrhagic vesiculations	8/17	6/16
Nausea or vomiting, or both	7/17	6/16
Numbness or tingling of tongue and mouth or scalp	7/14	3/10
Leukocytosis	6/11	6/14
Decrease in hemoglobin	7/17	5/16
Fasciculations	5/14	2/6
Blood pressure changes	7/17	12/27
Weak pulse	7/17	5/17
Increase pulse rate	7/17	12/25
Increase blood clotting time	7/17	2/6
Respiratory rate changes	6/17	6/20
Tingling or numbness of affected part	6/17	2/12
Respiratory difficulties	5/17	4/12
Necrosis	4/17	6/16
Hematemesis	4/17	2/18
Unconsciousness	4/17	5/11
Shock	4/17	5/11
Abnormal electrocardiogram	3/16	2/16
Convulsions	0/17	1/28
Paralysis	0/16	0/13

*Contributed by Doctors C. R. Anderson, A. B. Brower, J. Carlucci, I. A. Fields, E. Gettelman, C. L. Haines, Jr., J. R. Huntsman, E. F. Kline, A. E. Martin, C. J. McCammon, N. P. Papageorges and R. G. Zweifel.

†Number of times symptom or sign was observed in total number of cases.

of the southern Pacific rattlesnake. The latter's bite produced more pronounced changes in consciousness, more profuse weakness and sweating, more severe respiratory difficulties and more tingling or numbness over the affected part and over the tongue, mouth and scalp.

In the author's experience, bites by the sidewinders, *Crotalus cerastes,* have tended to be relatively mild. This may have been due in part to the small size of the snake, as the venom of this species is known to be very toxic.[6] Despite its small size the sidewinder is occasionally the cause of fatal ophidiasis in Southern California. The symptoms and signs following bites by the red diamond rattlesnake are similar to, but less severe than, those seen following bites by the western diamondback rattlesnake. This observation appears to be confirmed by the finding of Kline.[4]

Swelling and edema were the most consistent signs observed following envenomation by rattlesnakes in the 55 cases observed. Swelling usually occurred about the injured area within five minutes after the bite and progressed over the extremity during the ensuing one to thirty-six hours. In eight of the author's 22 cases, edema extended beyond the involved extremity.

Pain is a common complaint following rattlesnake bites. The intensity varies with the species of snake and the amount of venom. The most severe pain follows bites by the western diamondback rattlesnake and the red diamond rattlesnake. In three cases of poisoning by the southern Pacific rattlesnake and in one by the sidewinder, the pain was described as minor.

Decided weakness and sweating were consistently associated with poisoning by the southern Pacific rattlesnake. These symptoms were often associated with a rapid, thready, weak pulse and some decrease in systemic arterial pressure and body temperature.

Laboratory findings varied considerably. Mild leukocytosis, sphering of the red blood cells and defects in coagulation occurred in some cases. In four patients, progressive hemolytic anemia developed, the hemoglobin content eventually falling below 10.0 gm. per 100 cc. Elevated blood urea nitrogen and serum bilirubin were found in two of eight patients in whom tests for these substances were carried out. Hypofibrinogenemia was seen in three patients, hematuria in four, proteinuria in two, and glucosuria in six.

Deaths from rattlesnake bites in Southern California have been attributed to intraperitoneal or retroperitoneal hemorrhage associated with pronounced hemolytic anemia, to acute pulmonary edema associated with respiratory failure or to vascular collapse associated with acute hemolysis.

TREATMENT

The treatment and the rationale of the treatment for rattlesnake bites were discussed at length in a previous publication.[11] The suggestions offered in the present communication are based upon the author's clinical experiences, and upon animal experiments in this laboratory.[11,12,13,14]

Immobilization of the affected part with absolute rest for the patient are indicated in all cases. Application of a constriction band directly above the wound site, if the wound is on an extremity, is indicated. It should be released for 90 seconds every 15 minutes. Cruciate or longitudinal incisions one-eighth to one-quarter inch long through the fang marks are advisable if the snake was a large one or the patient is a child. The direction of the strike and the curvature of the fang should be borne in mind when determining the plane of the incision. The depth of fang penetration may be taken as approximately three-quarters of the distance between the two fang marks. Multiple incisions over the involved extremity or in advance of progressive edema are not advised.

Suction should be employed over the incisions during the first hour following the bite unless there is an abnormal amount of bleeding or obvious defect in coagulation. After the first hour the affected part should be placed in an ice bath and the tourniquet removed. Then an hour later ice bags may be substituted for the ice bath and used continuously for one to three days.

None of the foregoing first aid measures should in any way be regarded as substitutes for "the three A's," antivenin, antibiotic and antitoxin,[16] or tetanus toxoid should it be indicated; nor should they be instituted at the possible expense of delaying administration of the antivenin.

The importance of early antivenin therapy is well established.[2,15] The precautions and routes of administration for Antivenin (Crotalidae) Polyvalent® are outlined in the brochure enclosed with each package of the substance. The amount of antivenin used in an individual case depends on the species and size of the snake, the size of the patient, the number of bites, and other factors. For bites by the southern Pacific rattlesnake the author has used three to seven 10 cc. vials in each case. Children bitten by larger rattlesnakes will need at least four vials, possibly eight or nine; and in such cases early administration of the antivenin cannot be overemphasized. Bites by sidewinders require one to four vials. The route for administering the antivenin varies with the individual case. If the patient is not sensitive to the antivenin, the first vial can be divided into three portions and one portion given subcutaneously at various points around the involved extremity above the bite, or in advance of the swelling. Antivenin should never be injected into a toe or finger, however. The second portion is given intramuscularly into a large muscle mass of the involved extremity and the last portion is administered intravenously in a physiological solution. Subsequent doses should be given intramuscularly or intravenously. The anterior thigh is a good area for repeated intramuscular injections.

If the patient is sensitive to horse serum, desensitization should be carried out as indicated in the brochure accompanying the antivenin. Adrenocorticotrophic hormone and cortisone are of value in controlling untoward reactions to horse serum. More than one-fourth of the patients in the author's series of cases had hypersensitivity reactions to the horse serum or to an antibiotic or venom.

Because hemolytic anemia was often observed to follow rattlesnake bite, the author routinely determines the blood type of each patient on admission to hospital. Whole blood transfusions were given in five of the 22 cases. Bleeding and coagulation times should be determined, and hemoglobin determinations, red blood cell counts and urinalysis should be done repeatedly during the entire treatment and the immediate follow-up period.

Use of the appropriate antitetanus agent and antibiotic is advisable. Corticosteroids have been used in many areas of the United States in the treatment of ophidiasis particularly for bites by copperheads. The author has used them in several cases but has not been able to determine whether they were of value in either reducing the severity of the symptoms or shortening the stay in hospital. It is felt that the physician's reliance should be placed in the antivenin, and that until knowledge of the mechanism of action by which the corticosteroids enter into this complex reaction is more complete, their use should be limited to combating the allergic manifestations provoked by the venom or the horse serum.

Oxygen should be available for patients bitten by a rattlesnake, ready for use if symptoms of systemic involvement develop. Attention should be given to the maintenance of cardiovascular tone. The seriousness of the bite cannot always be determined by the extent of the local manifestations. Serious cardiovascular and respiratory deficits have been observed by the author 20 to 40 hours after the bite, at which time the edema and local tissue changes were minimal.

If a finger, hand or foot has been injured, physical therapy should be begun as soon as the patient's condition permits. Residual contractures are not uncommon. In Southern California the average hospital stay for rattlesnake bites is seven days.

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REFERENCES

1. Klauber, L. M.: Personal communication, April 22, 1959.

2. Klauber, L. M.: Rattlesnakes. Their habits, life histories, and influence on mankind, Berkeley, University of California Press, 1956.

3. Klauber, L. M.: Some factors affecting the gravity of rattlesnake bite, *In* Venoms, Washington, A.A.A.S., 1956.

4. Kline, E. F.: Personal communication, May 1, 1959.

5. Minton, S. A., Jr.: Some properties of North American pit vipers and their correlation with phylogeny, *In* Venoms, Washington, A.A.A.S., 1956.

6. Minton, S. A., Jr.: Polyvalent antivenin in the treatment of experimental snake venom poisoning, Am. J. Trop. Med. & Hyg., 3:1077, 1954.

7. Oliver, J. A.: Snakes and snake poisoning, *In* Clinical and Tropical Medicine, New York, P. B. Hoeber, 1944.

8. Parrish, H. M.: The poisonous snake bite problem in Florida, Quart. J. Florida Acad. Sci., 20:185, 1957.

9. Parrish, H. M.: Poisonous snakebites resulting in lack of venom poisoning, Virginia Med. Month., 86:396, 1959.

10. Pope, C. H., and Perkins, R. M.: Differences in the patterns of bites of venomous and of harmless snakes, Arch. Surg., 49:331, 1944.

11. Russell, F. E.: Rattlesnake bites in Southern California, Am. J. M. Sci., 239:1, 1960.

12. Russell, F. E., Michaelis, B. A., and Engelbert, R.: Some physiopharmacologic properties of Crotalus venoms, Fed. Proc., 19:388, 1960.

13. Russell, F. E., and Long, T. E.: Effects of venoms on neuromuscular transmission, *In* Second International Symposium on Myasthenia Gravis, Springfield, C. C. Thomas, in press.

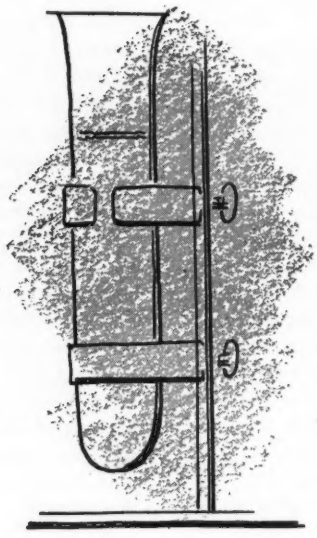
14. Russell, F. E., Emery, J. A., and Long, T. E.: Some properties of rattlesnake venom following 26 years storage, Proc. Soc. Exper. Biol. & Med., 103:737, 1960.

15. Schöttler, W. H. A.: Antigen-antibody relations in the present antivenin production of Brazil, Am. J. Trop. Med., 31:489, 1951.

16. Watt, H. F., Parrish, H. M., and Pollard, C. B.: Repeated poisonous snakebites in the same patient: Report of an unusual case, North Carolina Med. J., 17:174, 1956.

17. Witham, A. C., Remington, J. W. and Lombard, E. A.: Cardiovascular responses to rattlesnake venom, Am. J. Physiol., 173:535, 1953.

18. Wood, J. T., Hoback, W. W., and Green, T. W.: Treatment of snake venom poisoning with ACTH and cortisone, Virginia Med. Month., 82:130, 1955.



Impressions of Soviet Psychiatry

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• **Psychiatry in the Soviet Union is essentially conservative, middle-of-the-road and eclectic. It rejects both extremes: radical surgical treatment such as prefrontal lobotomy, and Freudian psychoanalysis. It is Pavlovian and neurophysiological in its orientation and closely linked to Marxian philosophy; most personal problems are believed to be sociocultural in origin, and they are expected to diminish as the country moves closer toward its political and economic goals, making psychiatry progressively more circumscribed in its applications.**

The varieties of therapy include work therapy, aimed toward returning patients to society quickly and productively; electrosleep therapy and electroconvulsive therapy, both of which seem to be falling into disrepute; insulin-coma therapy, widely used in psychosis; hunger therapy; pharmacotherapy similar to our own but lacking in the large numbers of drugs we use; tissue therapy; psychotherapy, of limited depth and chiefly concerned with the rational, conscious elements in the patient's life.

MY OVER-ALL IMPRESSION of psychiatry in the Soviet Union, based on a month-long visit there in the summer of 1959, is that it is an eclectic discipline, making use of a wide range of techniques. It is essentially conservative and middle-of-the-road. It has, on one hand, abandoned such radical surgical procedures as prefrontal lobotomies, and, at the other end of the spectrum, it also rejects psychoanalysis as we practice it in this country.

It occupies a relatively modest place in the total practice of medicine in the Soviet Union. One measure of this is the fact that there is less than one hospital bed for mentally ill patients per 1,000 population there, compared with the ratio here in California of 2.3 public beds per thousand, plus a considerable number of beds in private hospitals. This does not necessarily mean that there is less mental illness there than here, and it certainly does not mean that the Russians are less concerned than we are about meeting the health needs of the people. Indeed, they are very advanced and very aggressive in this respect. It does mean that they tend to treat emotionally disturbed persons on an outpatient basis as much as possible. It means, too, that the practice of psychiatry has neither the depth nor the scope there that it has in this country.

Like every other scientific discipline in the Soviet Union, psychiatry takes its cue from the prevailing political philosophy. The validity of all scientific findings is gauged by whether or not they are compatible with Marxism. It is within this context that the Freudian orientation is unconditionally rejected; it is considered inimical to Marxism. It is also within this context of political acceptability that the Pavlovian neurophysiological approach is the all-embracing one in Soviet psychiatry. Its materialist and mechanistic orientation is consistent with Marxian goals.

The types of problems presented to the psychiatrist in this country are considered by the Russians to be typically decadent and bourgeois. The concern for personal fulfillment, the emphasis on meeting the emotional needs of the individual, the probing into the unconscious to identify and clarify emotional conflicts—such considerations are alien to Soviet psychiatrists.

Essentially, their belief is that the problems of the individual are primarily socio-economic and environmental in nature. Many such problems are dealt with by agencies such as trade unions and Young Pioneers, which concern themselves with many of the kinds of problems that social workers handle in this country. Social workers as a professional entity are nonexistent in the Soviet Union.

It is believed there that as the country continues to make progress in achieving its Marxist goals, the problems of the mentally ill patient will no longer present themselves and that the practice of psychiatry will in due course wither away. Meanwhile, emphasis in psychotherapy is on integrating the individual within the social fabric, rather than on achieving self-understanding.

The cornerstone of Soviet psychiatry is the Pavlovian approach, which is concerned with the functioning of the cortex as the control center and the consciously thinking element of the brain. Function is interpreted in terms of stimulation-inhibition systems. Malfunction is explained primarily by imbalance or conflict between the dynamics of stimulation and inhibition. Treatment consists of restoring this balance in neurophysiological terms.

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Behavior is described in terms of unconditioned reflexes, which are innate; conditioned reflexes, which are learned patterns acquired through the developmental phases; and, in effect, a second layer of conditioned reflexes which are derived from and are dependent upon those originally learned. This concept binds all activity into a complex, interconnected neurophysiological pattern.

Given this orientation, the Soviet psychiatrist tends to deal with his patient in terms of the conscious, rational elements of his life situation. He persuades rather than probes, and tries to provide guidance rather than produce insight.

How does this philosophical and scientific orientation manifest itself in specific therapy? Some types of therapy I observed were eminently rational and directly reflected the Pavlovian approach. Others were almost metaphysical, somewhat bizarre, and, I must admit, highly provocative of thought in a student of psychiatry. Like most eclectic disciplines, Soviet psychiatry tends to be pragmatic and expedient. Like the practice of psychiatry elsewhere, it manifests inconsistencies and conflicts.

At the Bechterev Institute in Leningrad, I observed an impressive demonstration of work therapy. Here in a group of factory-like shops, both inpatients and outpatients spend a portion of each day at productive work.

The work that was being performed included the manufacture of fountain pens, buttons, hammocks, gymnasium equipment, fabric and furniture. The shops are well equipped and the work is supervised by technical experts who set and maintain high standards of proficiency. Products made in these workshops are sold to the general public through stores, and proceeds are spent to purchase new equipment for Bechterev and to pay for repairs.

The patient in work therapy is encouraged to continue with work of the type he was doing before he became ill, and the aim of the program is to return him as soon as possible to his productive function within the social organization. This aim directly reflects the Marxist orientation of the program.

There is recognition of the need for vocational retraining of some patients, particularly those with brain damage. This also is provided by the program.

Each patient is encouraged to work at his full capacity. The length of work day and complexity of the tasks are increased as the patients give evidence of improvement. The climate within the workshops is kept as free as possible from tension and stress, but the approach to the work is earnest and realistic—in decided contrast to the indulgent, "make-work" atmosphere which tends to characterize many occupational therapy programs in this country.

The technical supervisors in the workshops function under the direction of the psychiatric staff, which holds regular psychotherapeutic sessions with the patients, either on a group basis or individually. These sessions are devoted primarily to explanation, suggestions, guidance and advice with respect to work performance and work relationships. Psychiatrists also make daily rounds to observe the patients in the workshops.

In evaluating such a program, one must keep in mind that it is directly linked to the basic Marxian concept of work and its social usefulness. In a communistic society work is the central core of life. The dedicated attitude the individual worker has toward maintaining his status in the social organization through work infuses the work therapy program with a vitality which would be difficult to match in this country.

Yet, even in our individualistic society, people derive their satisfactions and their sense of identity, to a large extent, in terms of the constructive work they do. Work tends to deepen one's feelings of adequacy and helps overcome feelings of helplessness. Although I doubt that work as therapy in this country could ever be as all-enveloping as it is in the Soviet Union, there is a good deal to be learned from the Soviet program. I share their belief that a patient should suffer as little disarticulation from his work life as possible during treatment. The Russian goal of speeding the patient back to his normal pattern of work is one we might emulate.

In pronounced contrast to the reality-oriented program of work therapy was the almost mystical treatment I observed at Sochi. Sochi is one of a group of semitropical cities on the Black Sea coast that has been converted into "factories of health" for everyone.

Almost all "vacationers" as well as convalescents receive regular treatment at the palatial Sochi spa, an impressive marble structure that looks more like a Greco-Roman temple than a medical facility. Sochi is celebrated for the curative power of its sulphur springs. The sulphur-laden water is piped into the building to be used for an almost endless repertory of sulphur treatments, which are available for neurotic patients as well as those with somatic illnesses. The Soviet physicians who accompanied me persuaded me to sample several of the treatments, and insisted that sulphur had specific therapeutic value for neurosis. My impression was that the highly organized, hypnotically suggestive rites associated with the treatment was the main curative ingredient. I felt sure that tens of thousands of occult neurotics were kept in adequate compensation yearly in these sanitarium cities. Such patients, incidentally, do not show up in the official statistics on mental illness,

which suggests that for comparative purposes those statistics are of doubtful value.

Sleep therapy has been widely used in the Soviet Union, although I was given to understand that it is now falling into some disrepute. This treatment, which is quite different from electronarcosis as practiced in this country, induces sleep for a period ranging from ten to sixty days. Sleep is achieved through a sustained electric current which produces a protective cortical inhibition. The treatment is used for manic-depressive and schizophrenic patients and for those in acute anxiety states. The patient can be awakened for the intake of food and for meeting other physical needs, and returned to the sleep state simply by the removal and reapplication of the current. This treatment apparently provides temporary relief from acutely disturbing thoughts, sensations and feelings, probably thereby allowing a reconstitution of ego defenses, although such an explanation as this would not be acceptable to the Pavlovians.

Both insulin and electroconvulsive therapy are used in the Soviet Union, although the Russian psychiatrists' evaluation of these two treatments is different from ours. They use insulin-coma treatment extensively in the treatment of schizophrenic patients, with few reservations. In this country, on the other hand, insulin treatment is becoming less widely used because of the adverse side effects, the possible dangers and the time and expense involved.

Electroconvulsive therapy is currently in growing disfavor among Soviet psychiatrists. They believe that this treatment causes brain damage. Professor Fedotov, chief of the Institute of Psychiatry in Moscow, documented this thesis by demonstrating to me the brain damage produced in small animals by the use of electric currents. However, I believe that the experience we have had in this country with electroconvulsive therapy warrants its continued inclusion in our armamentarium, since brain damage in human material is considered by us as the unusual rather than the common occurrence. True, electroconvulsive therapy is sometimes used unwisely, and this indiscriminate use has reflected adversely on its reputation. But used in properly selected cases, and properly administered with the support of excellent muscle-relaxants which are now available, it is a sound and effective form of therapy.

Drugs are very widely used in Soviet psychiatric practice. They fit very properly within the Pavlovian orientation, since their action is organic. The Russian drugs are essentially the same as ours. The ones most widely used are aminazine (which is like chlorpromazine), reserpine and amphetamine. I saw nothing there comparable to meprobamate. Without the thrust of a highly competitive pharmaceutical industry, the Soviet Union does not have our great proliferation of each type of drug. This has both advantages and disadvantages. There it is possible to accumulate enough clinical data on each drug, through exhaustive and unvaried use, to yield significant conclusions. Here, we are under such promotional pressure to try out a new variation that we often virtually abandon good drugs before we have really tested their value to the limits. It sometimes seems that the staying power of a drug in this country is positively correlated with the size of its promotional budget rather than with its demonstrated effectiveness. On the other hand, out of the endless variations that are presented to us, we often encounter modifications that, although structurally minor, produce clinical significantly different results. This experience with a great range of derivatives is not available to our colleagues in the Soviet Union.

Drastic psychosurgery such as prefrontal lobotomy has been officially abolished in the Soviet Union since 1950. It has been denounced as a destructive procedure and contrary to the Pavlovian theory of protective inhibition. The position there is that in schizophrenia the cells are in a prolonged state of inhibition and do not function, but that there is always the possibility of recovery. Once the surgeon's knife has removed the cells, even that remote possibility is gone. Personally, I cannot quarrel with that point of view.

Hypnosis is in good repute in the Soviet Union. Since it functions through the mechanism of cortical inhibition, it is compatible with the Pavlovian approach. Although I encountered relatively little direct evidence of its use, I understand that some very rewarding research is being carried on there in the use of hypnotism in obstetrics, dentistry and anesthesia, and as an adjunct to psychotherapy.

One of the strangest techniques I encountered was the use of hunger therapy. This method, I was informed, was especially applicable to schizophrenics and severe depressive reactions, but contraindicated where much agitation was present. The patient is given no food at all for 30 days. The intake of water is also restricted. Vitamins and bicarbonates are provided to prevent severe nutritional deficiency syndromes and acidosis. During this period, the patient is very carefully watched medically. Blood chemical studies and urinalysis are done regularly. Every precaution is taken to make sure that the patient is undergoing no threatening physiological changes. After the 30-day period, the intake of food is gradually increased. This goes on for another 30-day period, at the end of which the patient has been restored to his normal intake.

I will have to admit that, except for its obvious effectiveness in dealing temporarily with obesity, I

fail to discern what therapeutic purpose is served. In most cases, depriving a person of food strikes a blow at his survival strivings. This treatment must certainly be construed unconsciously by patients as highly punitive, and if they improve as the result of it, it is probably because they have become restituted with the punitive demands of their own consciences.

Few therapeutic innovations in the Soviet Union challenged my imagination as vividly as did tissue therapy. I am in no position to validate for you the effectiveness of this concept, but I would like to report what I learned through my discussions with Dr. Filatova, widow of academician Vladimir Filatov, founder of the theory. Filatov was an ophthalmologist, and his theory of tissue therapy was evolved as the result of his work with corneal transplantation. To sum it up briefly, he discovered that such transplants were more effective when he took the cornea from the eye of a corpse and kept it in cold storage for several days, than when he worked with a fresh corneal graft taken from a living donor. Stimulated by this phenomenon, he undertook extensive investigations which led him to the hypothesis that all living material, both animal and vegetable, if maintained under conditions which are unfavorable but not lethal, responds by generating certain substances which he called biogenic stimulators, and that these substances are capable of stimulating the vital processes in an organism into which they have been introduced.

He attributed to biogenic stimulators a number of properties, such as deterring inflammatory and degenerative processes and intensifying the secretion of gastric juice and the formation of antibodies. On the basis of extended though inconclusive studies of the chemical nature of these stimulators, he suggested that their fundamental action was probably to increase the activity of enzymes of the body and consequently to improve metabolism.

Accordingly, Filatov concluded that tissue itself, under the proper circumstances, had enormous therapeutic capacities—that it could generate great adaptive powers within any organism. He used tissue in several forms—either segments of preserved tissue implanted surgically or tissue extract given by injection or orally.

At the Filatov Institute in Odessa, Dr. Filatova showed me a map which indicated widespread current research in tissue therapy. Between 1933, when Filatov started to work with tissue therapy, and his death in 1956, he had a series of fantastically successful experiences with it within his own specialty. Colleagues of his, according to his reports, were equally successful in treating skin lesions of various kinds, bronchial asthma, ulcers, tuberculosis, leprosy and venereal diseases. In addition—and this, of course, was of special interest to me—he reported favorable experience in treating two patients with advanced schizophrenia through tissue therapy, and cited similar results as having been reported by several Russian psychiatrists, including Lastovetsky, Shpak, Kopeliovich and Maslov.

I have touched on a number of somatic therapies used in the Soviet Union, but I do not wish to give the impression that these methods overshadow psychotherapy, which is becoming increasingly widely used there. Nor do I wish to suggest that psychotherapy in that culture is limited solely to a back-to-work movement. Despite the basic Pavlovian orientation, many diverse elements find their way into Soviet psychotherapy. There are now specialists who devote their entire professional time to a type of psychotherapy which is dynamically oriented. Professor V. N. Myasishchev, director of the Bechterev Institute, carries on such a practice, I am told.

These psychiatrists, although they do not seek a sexual basis for all behavior problems, do probe deeply into the patient's past for the psychogenesis of personality disorders. They search out obscure and concealed sources in experiences of childhood which might illuminate current symptoms. Their concern with the social integration of the patient has not completely obliterated their recognition of highly individual and personal emotional problems in the field of marital and familial relationships, and their psychotherapeutic methods of dealing with such problems are not unlike ours.

To sum up my impressions of Soviet psychiatry, I feel that its rigid adherence to Pavlov's orientation is a limiting factor, and that its subservience to the prevailing political philosophy is a grave hazard. On the other hand, the general willingness to try new techniques, such as those I have described today, indicates a vitality within the discipline. There is certainly much that is commendable about the reality-oriented approach of such treatments as work therapy.

From my point of view, the arbitrary rejection of Freud on the part of Soviet psychiatry creates a serious communications barrier between us and them. And yet, since most psychiatrists in this country are also fundamentally eclectic in their approach, the barrier is far from insurmountable.

On the basis of the month that I spent behind the Iron Curtain, I feel that psychiatrists on both sides of the curtain have a great deal to contribute to each other through an interested and alert exchange of ideas, approaches, experiences and findings. It is such interchange, no matter how baffling the barriers, that psychiatry—and indeed all of medicine—must seek, for our own strength and for the sake of the people we serve.

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Sensory Deprivation on an Eye Service

Its Significance and Management

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• **In a detailed investigation of 174 patients who wore patches over both eyes after ocular operations, some 35 per cent were observed to have one or more symptoms of mental aberrations. In a smaller group who had repair of retinal detachment and therefore had to wear eye patches for a much longer time, the incidence of mental symptoms was 100 per cent. A common symptom called "noncompliance" was found which has hitherto been regarded simply as lack of cooperation by the patient.**

The incidence of postoperative complications was considerably higher in patients who had symptoms of mental disturbance than in those who did not.

In these circumstances it would appear worth while to prepare the patient mentally for operation, to give him assurances beforehand, and to take measures to reduce his "isolation" while he has to wear patches.

PSYCHIATRISTS long have known that in some patients the visual deprivation caused by wearing patches over both eyes after ocular operations, together with the relative isolation due to restriction of movements and lack of familiar persons about them for a considerable time, gives rise to mental aberrations.

In the present study, psychiatrists and ophthalmologists working together have attempted to investigate more thoroughly the many types of mental symptoms arising in patients during a period of bilateral patching associated with treatment of the eyes, and to assess the possible significance of these symptoms as directly related to the condition of the eye on which operation was done.

In a previous report on a phase of this study,[3] the symptoms observed in these patients were described, including one called "noncompliance." Examples of the latter included sitting up in bed and removing eye patches after being specifically instructed not to. Previously, such actions had been regarded as simply lack of cooperation. However, considering the patients' motivation, the occurrence of the symptom during periods of reduced awareness (during, immediately before and immediately after sleep), and its frequent association with other mental symptoms like hallucinations, noncompliance came to be viewed as ascribable to mental aberration. Repeated interviews and continuous observation elicited that patients with patches over both eyes frequently had a clouded sensorium and periods of light sleep during the daytime. Such a state of reduced awareness, with loss of some of the normal inhibitions, apparently made noncompliance possible. Patients in the study were observed before, during and after the period of bilateral patching, which provided controls in evaluating mental symptoms.

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RESULTS

The frequency and severity of mental symptoms were noted to increase with the length of the period of bilateral patching. See Table 1. All of 15 patients operated on for repair of retinal detachment, had one or more mental symptoms, six having had hallucinations. Of 159 patients who had intra-ocular operations (such as for cataract removal), which entailed bilateral patching for no longer than 24 hours in most cases, only six had hallucinations and 47 had one or more mental symptoms. These two groups also served to illustrate the small role played by age alone, since the average age of the patients with retinal detachment was 40 while that of the group undergoing intra-ocular operation was 62 years.

TABLE 1.—*Incidence of Mental Symptoms in Patients with Patches Over Both Eyes*

Operation for:	Total No. of Cases*	Average Age (Years)	Patients with Mental Symptoms	
			No.	Per Cent
Retinal detachment	15	40	15	100
Intra-ocular disease	159	62	47	30
	174			

*Not all patients had operation.

TABLE 2.—*Incidence of Surgical Complications Following Intra-ocular Operations*

	Total No. of Cases	Complications	
		No.	Per Cent
Mental symptoms present.....	35	18	51
Mental symptoms absent	109	27	25
	144	45	

In an attempt to determine the effect of these aberrations on the results of operation, the incidence of surgical complications in patients who had mental symptoms was compared with the incidence in those who had not (Table 2). Table 3 lists the incidence of specific complications occurring after operations for cataract extraction, and further shows whether the complication occurred during the time the patches were in place or after they were removed. This separation as to the time of occurrence highlights the fact that complications are greatest during the period of binocular patching (one day). The difference is particularly striking in that all the other complications were scattered over a nine- to thirteen-day period, when the eye not surgically treated is uncovered. In general the incidence of complications was significantly higher in the aberrant group than in the undisturbed. Hemorrhage into the anterior chamber in patients with patches over both eyes is four times as frequent in those with mental disturbance as in those without.

MANAGEMENT

The significance of mental symptoms in association with operations on the eyes is undoubtedly greater than ophthalmologists in general have recognized. We believe there is much to be gained by even a brief appraisal of the mental status of a patient who is to have an eye operation, for it may bring to light significant mental defects or traits such as alcoholism or senile changes. Any physical factors that might make absolute bed rest or prolonged stay in a supine position difficult or even painful for the patient should be corrected or minimized before operation. Detailed and repeated explanations of the operative and postoperative routine are

TABLE 3.—*Incidence of Specific Surgical Complications in Mentally Disturbed and in Normal Patients Following Cataract Extraction*

	With Mental Symptoms (36 Patients)		Without Mental Symptoms (97 Patients)	
	No.	Per Cent	No.	Per Cent
While wearing patches bilaterally (one day):				
Hyphema	6	17	4	4
Iris prolapse	0	....	1	1
Flat chamber	1	3	1	1
After removal of patches (9 to 13 days):				
Hyphema	5	14	8	8
Iris prolapse	0	....	2	2
Flat chamber	3	8	7	7

usually indicated. This and the surgeon's reassurances of a successful outcome will help to allay the patient's fears and anxiety. The presence of a language barrier or a hearing defect makes explanation and reassurance even more important.

The value of having someone, either a nurse or a member of the family, constantly at the bedside during the difficult period the patient must wear patches has long been recognized.[1,2] At present we are attempting to evaluate this factor statistically in a controlled study, using constant family attendance in one ward and not in another. Where this is not possible, the use of bedside radios and frequent conversations between the patient and ward personnel help to minimize the feeling of isolation.

Of immediate importance to ophthalmic surgeons is the need to reappraise at intervals the routine handling of surgical patients in relation to changing surgical techniques. Adoption of newer retinal detachment procedures by some surgeons, for example, has all but eliminated prolonged bilateral patching for their patients.

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REFERENCES

1. Bruner, A. B.: The postoperative treatment of cataract, Ohio State M. J., 91:501, 1935.

2. Greenwood, A.: Mental disturbances following operation for cataract, J.A.M.A., 91:1713, Dec. 1928.

3. Ziskind, E., Jones, H., Filante, W., and Goldberg, J.: Observations on mental symptoms in eye patched patients. Hypnagogic symptoms in sensory deprivation, Am. J. Psychiat., 116:893, April 1960.

The Significance of Infection in Allergic Disease

Its Influence on Diagnosis and Management

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• **The presence of infection in allergic disease produces a confused picture in which two different causative factors must be clearly separated by the physician if he is to treat the patient successfully. The effects of infection are not consistent. There are situations, as seen in infectious diseases, where symptoms of allergic disease are temporarily relieved and others where the infection may intensify or precipitate the allergic condition. It is likewise important to recognize the complications superimposed upon allergic disease by infection. In such cases, control of the infection is as dependent upon control of the allergy as it is upon antibiotics.**

THE DEVELOPMENT of concurrent infection in allergic disease produces a double effect because not only is the pattern and course of the allergic disease altered but, reciprocally, the infection is also thereby modified. This ambivalent circumstance can produce diagnostic and therapeutic confusion and can also lead to the convenient premise that infection is the cause of the entire clinical manifestation unless the interrelationships are understood. Available evidence and clinical experience does not support this belief.

Misunderstanding develops from a failure to specifically limit definition of the term *allergy* to clinical considerations wherein such organs as the respiratory tract or the skin manifest allergic disease and almost invariably respond to specific treatment. Broad use of the term *allergy* to include the immune reaction to tuberculin or to such vaguely understood areas as collagenous disease, has no place here. We shall confine our remarks, therefore, to the clinical conceptions of allergic disease as commonly encountered in everyday practice and which are involved with but not caused by infection. Although the two may seem inseparably related, they must be recognized as separate and treated individually.

Today's concept of infection recognizes its systemic effect in addition to the local focus of inflammatory response. Fever, lymph nodal enlargement, cellular changes in organs with alteration of function and concurrent changes in pituitary and adrenal gland responses attest the constitutional impact of both viral and bacterial disease. This general responsiveness and change necessarily has an effect upon an allergic person, for his disease is also a constitutional one even though the apparent manifestations are focussed in one area or shock organ. With infection the local response tends to be the focal point of the cause whereas in allergic disease the local response is secondary to a systemic cause. It is not unusual, therefore, to find that symptoms of allergy are altered by infection just as infection can be exaggerated or intensified when it develops upon the stroma of allergic disease. It is the variable role that infection plays which must be recognized and understood in order to place it in its proper perspective.

The episode or attack of allergic disease which accompanies or is precipitated by infection is most commonly encountered in practice. Since the life history of an allergic person is punctuated by exacerbations and remissions of symptoms, it is not unusual to find the onset of some episode initiated by the development of an acute infection. An attack of asthma may be associated with such a sequence, yet a detailed history will uncover previous asthma or other allergic symptoms indicating that this attack was not de novo. The onset of prolonged exacerbations of allergic rhinitis, particularly during the winter months, sometimes will start with an infection manifested by fever and purulent nasal drainage for a few days. The nocturnal cough which persists long after such an onset similarly connotes a postnasal drip from an allergic nasal mucosa.

The idea of an infectious onset is commonly misapplied to bronchial asthma. Nasal symptoms—obstruction, sneezing and rhinorrhea—will often characterize the early phases of this condition. In describing this sequence of events the patient may misdirect attention to a non-existent upper respiratory tract infection rather than to the asthma itself. It is advisable to insist upon an explicit definition of the word "cold" which is so loosely applied

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to respiratory symptoms of all varieties. Similar diagnostic confusion develops because chronic respiratory symptoms are too readily diagnosed as bronchiectasis. Allergists encounter few such cases in which that diagnosis can be thoroughly substantiated. Patients with that diagnosis may have bronchial asthma and thrive therapeutically when so treated. At the Long Beach Veterans Hospital a survey of patients who had been labeled in other centers as having bronchiectasis produced relatively few valid cases when subjected to critical review. Radiologists in a large local hospital who were questioned on this subject said that bronchiectasis as a radiological diagnosis is very unusual in their experience.

These observations suggest that greater caution is needed in assessing chronic respiratory disease. In particular it should be recognized that such chronic symptoms as are accompanied by considerable expectoration of sputum should be suspect for bronchial asthma before consigning them to the more dismal prospects often associated with bronchiectasis. Finally, it is important to recognize the mild, superficial bronchitis which occasionally complicates asthma and is accompanied by purulent sputum, minimal systemic symptoms and a prompt response to expectorants and to antibiotic therapy.

Some infections suppress rather than potentiate allergic disease. This is particularly true of the viral diseases, for symptoms of allergic reaction diminish or even vanish entirely under their influence.[3] Such observations are common during the infectious diseases of childhood. Although the exanthem of chicken pox, for example, may be quite intense in an eczematous patient, is is reassuring to the parent to know that the allergic rash tends to subside. There seems to be no direct connection between this suppressive effect and the clinical intensity of the viral disease. Part of this pattern is the brief exacerbation of allergic disease during the invasion period of infectious disease. This will usually evaporate as full blown symptoms develop. It is possible that the relationship is a type of immunological inhibition or is perhaps related to the stress phenomenon which accompanies invasion of a virus. This symptom pattern was noted by us during a recent epidemic of influenza as well as during brief episodes of viral enteritis. One of us[2] reported the suppression of eczema during the course of Kaposi's varicelliform eruption, a disease most often caused by the virus of herpes simplex. Recognition of this relationship, therefore, is essential if the physician is to anticipate events and reassure the patient or parent.

Conversely, upon examination of the effect of allergic disease upon infection, it is observed not only that the infection can be intensified but that in almost all such situations it is the respiratory tract that is affected. When this occurs, adequate drainage of secretions is essential if infection is to resolve promptly. The patient with allergic disease of the respiratory tract must dispose of excessive secretion of mucus from the sinuses, the nasal mucosa or the bronchi. Interference with this evacuation, whether by edema or inspissated mucus, leads to stasis and encourages the development of secondary infection, and treatment of both the allergic obstruction and the infection becomes necessary.

A number of typical examples may be cited. Sinus infection must generally be regarded as developing in this fashion, and it has been reported that the infection in this instance is usually superimposed upon mucosa altered by allergic response.[9] The same investigator found the sinus infection quite superficial, suggesting that adequate drainage could be the primary ingredient of a cure.

In such circumstances the effect of surgical treatment is, at best, to provide temporary relief while by-passing the underlying allergic cause. The only indication for surgical interference in the nose in the vast majority of cases of sinus infection or even of simple airway obstruction is the presence of obstructive nasal polyps. Middle ear infection in many instances is secondary to allergic edema of the fossa of Rosenmuller that closes the eustachian orifice. The presence of lymphoid or adenoid tissue in this area in children explains their increased susceptibility, since such tissue swells easily. If the obstruction is not relieved soon after the initial symptom of ear pain, secondary infection develops rapidly. In bronchial asthma a very serious sequence of events attends the obstruction of a bronchus by a plug of inspissated mucus. That area of lung beyond the plug becomes atelectatic and pneumonitis develops rapidly. One can observe the tremendous importance of obstruction in such cases when dramatic evaporation of clinical evidence of infection is produced by expulsion of the mucus plug. Here again it is apparent that treatment of the infection alone is insufficient. One of the dangers inherent in all these examples of infection incident to allergic obstruction is the tendency for the acute infection to so obscure the allergic component that the physician's attention is drawn exclusively to the infection.

When the skin is involved in allergic disease, secondary infection is relatively uncommon even in the presence of impetiginous lesions of the unaffected skin.[1] One can infer that the eczematous skin must be particularly resistant, since it is subjected to constant trauma and excoriation of scratching with dirty hands. Occasionally, a simple pustular eruption becomes superimposed and responds rapidly to antibiotic therapy. Chronic, low grade infection is also seen now and then with local enlargement

of lymph nodes as its cardinal characteristic. While the suppressive effect of viral disease has already been mentioned in this regard, viral involvement of the eczematous skin is sometimes seen and can be very serious. The virus of both herpes simplex and vaccinia invade areas involved in eczema, producing Kaposi's varicelliform eruption. No specific therapy is available for this disease, which can be attended by pronounced toxicity and, occasionally, by death. It is therefore a very important prophylactic measure not only to withhold vaccination from patients with eczema but also for such patients to avoid exposure to herpes simplex.

Occasionally an allergist is consulted regarding unknown fevers, and in some such cases a rather typical but obscure syndrome may be found. The patient with this syndrome is invariably a child with perennial nasal symptoms and long periods of elevated temperature lasting for weeks or even months. Exhaustive investigation for the cause of the fever produces no etiologic clues and extensive use of antibiotics proves fruitless, and the nasal symptoms are patently of allergic origin. We are currently treating two such children by specific hyposensitization injections who are now able to attend school regularly whereas they had previously required home tutors because of prolonged absences due to persistent fever. The diagnostic obscurity of these cases and the failure of all other therapeutic efforts is ample justification for management directed at relief of allergic response when evidence of allergic disease exists.

Consonant with the foregoing remarks it should be apparent that concomitant allergic disease and infection require a therapeutic program which considers both factors. It is unfortunate that the concept that infection is a cause of allergic disease still exists, for it thwarts effective therapy. Siegal studied 109 asthmatic patients with sinus disease and came to the conclusion that the infection was not causally related but merely superimposed upon the associated upper respiratory tract allergic disease.[9] Hosen and Carabelle observed a large group of patients and concluded that in no case at any age could infection be labeled as a cause of allergic disease, although they regarded it as being of considerable importance as a secondary or trigger mechanism.[7] Because allergy is etiologically independent of infection, the use of bacterial vaccines is illogical and ineffective. Well controlled studies on large numbers of patients with asthma showed unequivocally that no better results are obtained with vaccine therapy than with injections of saline solution used as controls.[4] Helander, who used a double-blind format for his investigations, pointed out the danger of local and systemic reactions to injections of bacterial vaccines which he considered as more dangerous and certainly far less effective than specific hyposensitization.[6] Any apparent connection between vaccine injections and successful results must be classified as either a placebo effect or as a nonspecific protein reaction which for many years has been known to be of some slight value in the treatment of allergic disease.

The importance of drainage in infections of the allergically involved respiratory tract cannot be overemphasized. Involvement of the nasal passages and sinuses calls for the use of decongestants, which should be mild and buffered to avoid further irritation. Too frequent use of powerful or irritating solutions in the nose will cause a subsequent and more severe edema. Antihistamines will augment decongestion but seem to lose their effectiveness in the presence of inflammation. The relative potency of these drugs varies with the individual patient and they must be tried on this basis. Liberal quantities of decongestant should be used early in acute otitis media in an effort to open the eustachian tube orifice. At least 1 cc. should be instilled, with the head tilted to be certain that the solution reaches the part. When effective, this should be repeated at three-hour intervals to maintain patency. Drainage of the bronchial tree involves a different therapeutic approach. Particularly, antihistamines should be avoided, as they have drying action which encourages mucus plugging.[10] Efforts should rather be directed toward thinning and softening the mucus secretions and encouraging their evacuation by cough. Nothing has been found more effective for this purpose than the liberal ingestion of fluids. This must be dramatically impressed upon the patient, with intravenous administration offered as the only alternative. To implement the effect of fluids, potassium iodide in saturated solution stands alone as an efficient expectorant regardless of proprietary claims. The use of agents that suppress cough is obviously antagonistic to these principles and must be avoided.

Antibiotics are unquestionably effective as a part of the therapeutic regimen but their use in uncomplicated allergic disease and as prophylaxis has proved to be of little value. More complications and longer illnesses develop when antimicrobial agents are used to prevent infection, according to Reimann.[8] It is therefore mandatory to assess respiratory symptoms carefully and to seek supportive evidence of infection such as fever and increased leukocyte content in the blood. Combinations of antibiotics should be avoided since their effect is rarely additive and there is strong evidence that some may be less effective than when given alone.[8] In particular, the popular combination of penicillin and dihydrostreptomycin produces serious toxicity too often to permit casual administration of it. Where it is pos-

sible to obtain purulent material, titration of the organisms for selective antibiotic sensitivity, although not infallible, is recommended for a more specific selection of a drug. Although systemic administration of antibiotics is invariably most effective, combining them with nasal decongestants used topically in mild nasal infections is useful. The popularity of gamma globulin as prophylaxis against infection is not supported by the facts. Several recent reports indicate that its use is of questionable value.[5] Steroids should rarely, if ever, be used in the presence of infection. When infection develops in a patient receiving a maintenance dose of steroids, the dose should be increased to meet the greater demands for the steroids that the suppressed adrenal cortex cannot meet.

Discussion thus far has been confined to treatment of the acute episode of concomitant infection and allergic disease. It is only natural to expect the allergic symptoms to continue with their characteristic chronicity and for future incidents of infection to arise. This pattern can be anticipated and prevented by management of the allergic factor. A careful and detailed history supplemented by a physical examination must be obtained. Corroboration by skin testing should then follow and a long-range therapeutic regime established. This should include elimination of factors in the environment and in the diet, when warranted, and a course of hyposensitization with a specific antigen administered as indicated by the investigation. In this fashion one can practice truly prophylactic therapy, as proven by a decided reduction or elimination of episodes of infection consequent to improvement of the symptoms of allergic reaction.

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REFERENCES

1. Bookman, R.: Problem of eczema, J.A.M.A., 159:1275, Nov. 26, 1955.

2. Bookman, R.: Kaposi's varicelliform eruption, J. Allergy, 21:68, Jan. 1950.

3. Feingold, B. F.: The influence of acute infection upon the course of allergy in children, J. Pediat., 34:545, May 1949.

4. Frankland, A. W., Hughes, W. H., Gorill, R. H.: Autogenous bacterial vaccines in the treatment of asthma, Brit. Med. J., 2:941, Oct. 15, 1955.

5. Friedlander, S., Friedlander, A. S., Werner, L.: Gamma globulin in the management of asthma associated with infection, Amer. J. Med. Sc., 238:18, July 1959.

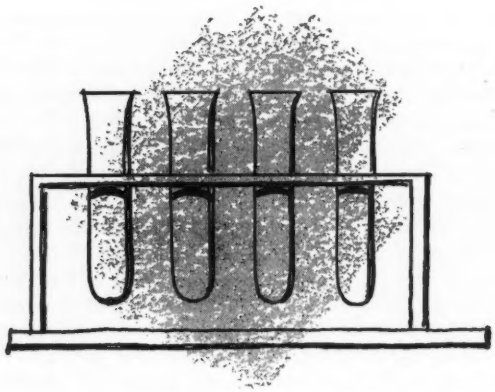
6. Helander, E.: Bacterial vaccines in the treatment of bronchial asthma, Acta Aller., XIII:47, 1959.

7. Hosen, H., Carabelle, W.: The relationship of bacterial infection and respiratory allergy, Ann. Allergy, 12: 597, Sept.-Oct. 1954.

8. Reimann, H. A.: Infectious diseases, A.M.A. Arch. Int. Med., 102:217, Aug. 1958.

9. Siegal, S., Goldman, J. L., Arnold, L. M.: Sinus disease, bacterial allergy and bronchial asthma, Arch. Int. Med., 79:431, April 1956.

10. Weatherman, H.: Pulmonary collapse as a complication of bronchial asthma in a child, Calif. Med., 86:285, Oct. 1958.



Physicians as Psychotherapists

HORACE GRAY, *M.D.*, Santa Barbara

EFFORTS TO AROUSE local participation in community mental health services have met with some difficulties, which have been examined at a number of conferences in the last five years.[5-10] In these conferences repeated mention was made of a staff composed of representatives of three disciplines —a board-certified psychiatrist, a clinical psychologist with a master of arts or preferably a doctor of philosophy degree, and a social worker with a master's degree in that school.

Few voices have been raised in favor of any other class of staff member. But there have been a few such suggestions: Knowles[4] reported: "The nurse is an innovation. I had originally hired her, and for approximately sixteen months taught and supervised her. Since then the board of directors has placed her on the clinic's payroll where she functions chiefly as a child therapist and over 50 per cent of our actual time is spent in child psychiatry." And, Southard[11] wrote: "Except in one of the communities, we looked in vain for planned efforts to involve general practitioners in mental health work."

These approaches to ways to reduce the number of persons waiting for treatment, which is a problem of universal concern, led to the present communication. Attention is called to another category of therapists.

A review of the pamphlets already cited did not reveal what proportion of the conventional three-discipline teams are salaried. Most appear to be. Volunteers from other disciplines could obviously reduce the cost and afford care to more applicants for clinic guidance. In this connection it is insufficiently appreciated that less than 10 per cent of admissions to mental hygiene clinics in general (in a recent year it was 3 per cent in the Santa Barbara clinic) are persons disturbed enough to require expert psychiatric assessment with referral for hospital care.

During the ten years of my work there, the Mental Hygiene Clinic in Santa Barbara has had psychiatrists, psychologists and social workers, sometimes as volunteers, sometimes paid. Also we have had another category—physicians (all unpaid) who started in several fields and became active in what the British have so well called psychological medicine. One of them is board-eligible in psychiatry, one is board-certified in internal medicine and one board-certified in pediatrics. Two have been members of the American Psychiatric Association. Two have had personal analysis. All three, like most medical folk, have faced some psychotic patients, but all three have wished to work in a setting in which a certified psychiatrist was available to see, and if necessary to take over care of, patients who showed signs of crossing the borderline from mildly schizoid to dissociation from reality. These three have been occupied in child guidance, internal medicine and pediatrics; and for roughly 20, 15 and 5 years respectively have been engaged in psychotherapy of neurotic patients.

It is being increasingly appreciated that many patients with emotional problems consult their family physicians long before they are ever seen by a psychiatrist, and therefore most physicians use some kind of psychotherapy. This aspect was well brought out by the recent report of the Joint Commission on Mental Health, headed by Dr. Jack Ewalt of Massachusetts. Accordingly general practitioners and specialists are today playing extremely important roles in care of emotional needs of their patients, while sensitive to the occasional desirability of securing consultation with psychiatrists.

Chope,[2] whose replies to a letter I had written indicate the nature of my inquiries, said:

"The problems presented in your letter of inquiry are not uncommon and I did not wish to leave the impression that the organization of our psychosomatic clinic had been at any time completely endorsed by all the psychiatrists. The physician who operates our psychosomatic clinic has been a general practitioner, with a deep interest in psychotherapy and family counseling. He has had in his past his own personal analysis. Our psychiatric staff did not accept this background as being adequate to practice in all psychiatric procedures. However, he does operate his clinic with a psychiatric consultant, with whom he is able to discuss cases. He uses both direct and group therapy with the patients who are referred to him.

"On the important basis that it is under psychiatric supervision, the state department of mental hygiene seems willing to consider this type of service, although psychosomatic medicine per se is not covered by the Short-Doyle Act nor by the regu-

From the Mental Hygiene Clinic, Santa Barbara.
Submitted June 21, 1960.

lations which govern the operation of Short-Doyle programs."

So far as I have been able to ascertain, the kind of service sketched in Dr. Chope's letter seems to have been ignored in state legislation for community mental health services, although it has long been recognized in university medical and surgical outpatient clinics that use of this class of therapists could greatly increase the personnel available for community clinics.

The value of various classes of the staff might be judged by several criteria. One is cost. Although cost of operation is not a principal concern of the present communication, we believe that at the Santa Barbara Mental Health Clinic our cost per patient admitted has been low because we have had a high proportion of the staff hours given by volunteers. Another criterion is the number of patients dealt with or the number of interviews. Either by itself is an unreliable basis for evaluation, for either datum of itself might appear to indicate creditable activity, whereas in fact it might reflect a demand exceeding supply of staff, with necessarily only cursory care.

A more dependable statistic would be the hours *given* by each category of staff; and far the most useful measure of the amount of service rendered to the public would be the hours *received*. These data for the latest four calendar years, 1956-1959, are as follows:

	Patients' Individual Hours, i.e., Hours Given	Patients' Hours-in-Group	Total Hours Received	Per Cent of 11,014 Hours
8 Psychiatrists	2,437	779	3,216	29
4 Psychologists	1,485	0	1,485	14
3 Social workers	1,244	0	1,244	11
3 Medical psychotherapists	1,580	3,489	5,069	46
			11,014	100

The point for emphasis is that 46 per cent of the total hours received by patients was given by three volunteer medical psychotherapists.

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ACKNOWLEDGMENT

For several years the work of tabulating the hours each month has been given by Mrs. Margaret J. Campbell.

REFERENCES

1. California Directory of Mental Health Clinics, State Department of Mental Hygiene, Sacramento, August 1957, 65 pp.

2. Chope, H. D., Director of Department of Public Health and Welfare of San Mateo County, letter dated May 6, 1960.

3. Fifteen Indices: An Aid in Reviewing State and Local Mental Health and Hospital Programs, Joint Information Service of American Psychiatric Association and National Association for Mental Health, Jan. 1960, 85 pp.

4. Knowles, R. C., Director of the Minnehaha County, South Dakota Mental Health Center; see Ref. 7, p. 197.

5. Milbank Memorial Fund: An Approach to the Prevention of Disability from Chronic Psychoses. The Open Mental Hospital within the Community. Report of the Second Meeting of the Advisory Council on Mental Health Demonstrations. Proceedings of the 34th Annual Conference of the Milbank Memorial Fund, 1957, Part I, New York, 1958, 80 pp.

6. Ibid.: Planning Evaluations of Mental Health Programs. Report of the Second Meeting of the Advisory Council on Mental Health Demonstrations. Proceedings of the 34th Annual Conference of the Milbank Memorial Fund, 1957, Part II, New York, 1958, 104 pp.

7. Ibid.: Progress and Problems of Community Mental Health Services. Papers presented at the 1958 Annual Conference of the Milbank Memorial Fund, held October 22-23, 1958, at the New York Academy of Medicine, Part I, New York, 1959, 232 pp.

8. New York State Community Mental Health Boards, First Annual Conference, at Syracuse, N. Y., Jan. 30-31, 1956, 75 pp.

9. Ibid.: Second Annual Conference, at Albany, N. Y, April 7-9, 1957, 143 pp.

10. Ibid.: Third Annual Conference, at Syracuse, May 18-20, 1958, 141 pp.

11. Southard, C. G., Chief, Community Services Branch, National Institute of Mental Health: A View of Local Community Mental Health Programs, see Ref. 7, p. 82.

CASE REPORTS

Leiomyoma of the Rectum with Unusual Clinical Features

GERALD MASON FEIGEN, M.D., and
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LEIOMYOMAS in the lower rectum are rare, and although there have been some 72 cases reported since 1891, none similar to the case here reported was found. The unusual features of the case include presence of a fistula-like tract joining the lower pole of the tumor with the mucocutaneous line, and the clinical symptoms of constant pain in the ipsilateral hip, thigh and knee.

Leiomyoma of the rectum was first reported in 1881 by Vander Espt.[9] In 1921 Hunt[6] reported four new cases and reviewed 20 cases reported up to that time. In 1933 Hartmann, Bertrand-Fontaine and Guerin[5] reported a case and reviewed the literature, revealing that 37 cases had been reported by 1933. In 1934 Geschickter[3] surveyed muscle tumors of the gastrointestinal tract in the Johns-Hopkins Hospital and reported only one of twenty-five benign leiomyomas occurred in the rectum. Golden and Stout[4] in 1941 reported that five of thirty such tumors were located in the rectum.

The reports in the literature were reviewed with particular attention to the site of the lesion, the sex and, where given, the age of the patient. Stout,[7] reporting on 20 cases, noted that ten of the lesions were in the colon and ten in the rectum; there was no significant difference in sex incidence, and the age spread was from 10 years to 67 years. Anderson, Dockerty and Buie[1] reviewed ten cases recorded in the files of the Mayo Clinic from 1911 to 1946. The age range of patients was from 28 to 61 and there were seven women and one man. Swartzlander, Jackman and Dockerty[8] in a study of 91 submucosal rectal nodules discovered five leiomyomas, four in males, one in a female. In a series reported by Hartmann and co-workers,[5] 20 of the patients were females, 15 males.

REPORT OF A CASE

A 42-year-old white man was first observed September 25, 1959, with complaint of pain during defecation, vague rectal discomfort and a constant pain in the right hip radiating down the back of the right thigh to the knee. There was no change in bowel habit, no bleeding with bowel movement, no discharge of pus, no protrusion and no loss of weight.

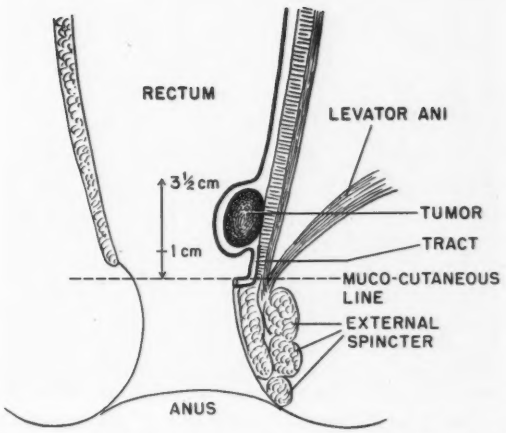

Figure 1.—Diagrammatic representation of location, size, and anatomical features of the tumor presented in present case.

On proctologic examination no abnormality was noted in the external perianal area. Upon digital palpation a firm mass about 2 cm. in diameter was felt in the right lateral rectal wall between 1 and 3.5 cm. from the mucocutaneous line. The tumor was slightly movable and was apparently submucosal. From the lower pole of the mass to the mucocutaneous line, a hard fibrous tract resembling a fistula was palpated (Figure 1). Milking the tract did not express any pus, and no apparent primary opening of a fistula was visualized. Through an anoscope a small bulging lesion was seen in the lower rectum. The color of the overlying mucosa was normal and there was no ulceration. No abnormality was noted on sigmoidoscopic inspection. X-ray films of the lower back and pelvis did not show evidence of pathologic changes that might account for the pain in the hip and thigh. Results of routine laboratory studies were all within normal limits and the patient was admitted to hospital October 4, 1959, with a preoperative diagnosis of rectal neoplasm and possible submucosal abscess and fistula.

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Submitted July 26, 1960.

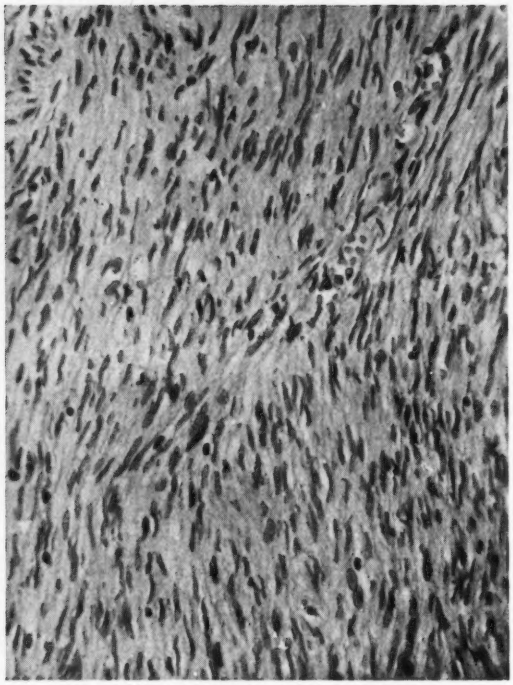

Figure 2.—Microscopic appearance of leiomyoma of rectum (×400). The tumor is quite cellular; it is composed of neoplastic smooth muscle cells arranged in interlacing bundles. The neoplastic cells vary slightly in size, shape and staining quality, and occasional mitosis is noted. There are a few small portions of nonneoplastic smooth muscle fibers. There is no evidence of malignant disease.

The mucosa overlying the mass was incised and the growth exposed. It was yellow-white and was encapsulated except at the lower pole. A probe inserted at the lower pole passed readily through a thin fibrous tract to an opening at the mucocutaneous line. No pus was seen. The tumor and the tract were excised, and an ellipse of anoderm was removed to provide drainage. In cutting the tract, some of the fibers of the internal sphincter were incised. Because of the possibility of infection, the wound in the rectum was not sutured. An Oxycel® pack was applied. The pathologist described the specimen as a cellular leiomyoma of the rectum with no evidence of malignant change (Figure 2). The patient recovered promptly and normal bowel habits soon resumed. Gradually the pain in the right thigh and knee subsided and in four weeks was gone. When last examined some five months later the operative site was completely healed and there was no evidence of local recurrence.

DISCUSSION

Summarizing the clinical findings in reported cases, one can conclude that leiomyomas of the rectum are rare tumors, usually without clinical symptoms, occurring as early as the first decade of life and as late as the seventh, but most commonly in the fourth and fifth decades, with a slight predilection for females. They usually are within 3 cm. of the mucocutaneous line, are yellow-white in color, and average about 1.5 cm. in diameter. They are intramural or submucosal, and never ulcerate or bleed. When locally excised they tend to recur, and they are disposed to undergo malignant change, becoming leiomyosarcoma.

SUMMARY

A case of leiomyoma of the rectum with unusual features is described and the literature reviewed.

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REFERENCES

1. Anderson, P. A., Dockerty, M. B., and Buie, L. A.: Myomatous tumors of the rectum, Surgery, 28:642-650, 1950.

2. Ewing, J.: Neoplastic Diseases, W. B. Saunders, Philadelphia, 1940 (4th ed.), p. 237.

3. Geschickter, C. F.: Tumors of muscle, Am. J. Cancer, 22:378-410, 1934.

4. Golden, T., and Stout, A. P.: Smooth muscle tumors of the gastrointestinal tract and retroperitoneal tissues, Surg., Gynec. & Obst., 73:784-810, 1941.

5. Hartmann, H., Bertrand-Fontaine, T., and Guerin, P.: Les myomes du rectum, J. de Chir., 42:1-7, 1933.

6. Hunt, V. C.: Myoma of the rectum; report of four cases, Ann. Surg., 74:236-244, 1921.

7. Stout, A. P.: Tumors of the Colon and Rectum. Turell, Diseases of the Colon and Anorectum, 1:295-311, Saunders, Philadelphia, 1959.

8. Swartzlander, F. C., Jackman, R. J., and Dockerty, M. B.: Submucosal rectal nodules, Am. J. Surg., 92:657-665, Nov. 1956.

9. Vander Espt: Quoted by Hunt, V. C.[6]

California MEDICINE

EDITORIAL

Future Physician Recruitment

IN ADOPTING A PROGRAM of scholarships for secondary school students and college undergraduates and of loans for students in medical schools, the House of Delegates of the American Medical Association at its mid-winter meeting strengthened the hand of the medical profession for the bidding it must do to persuade the best qualified students to take up the study of medicine.

This program grew out of studies that were begun when medical leaders became aware that with population growing apace and the relative number of competent students seeking medical training declining, a shortage of physicians appeared to be in the making. We in California, where growth in population is a pressing fact and where we have five medical schools seeking apt students for enrollment, must have particular concern with this problem.

Traditionally bound to maintain both the quality and the adequacy of supply of medical care, the A.M.A. set a Special Study Committee of the Council on Medical Education and Hospitals to the task of finding out what the future needs in this regard are likely to be and how to meet them.

From its investigations the committee concluded:

There is a decline in the number and quality of eligible college students manifesting a serious interest in medicine as a career.

This apparent shift away from medicine is due in part to the high cost in time and money of securing a medical education.

The trend has been heightened by a dramatic emphasis on careers in science and engineering which are stressed by the urgency of certain domestic and international issues.

The cost of post-baccalaureate education in other sciences is usually much less than the cost of a medical education.

An affluence of scholarships, fellowships and other financial aids for graduate students in many fields is in striking contrast to a relative paucity of similar financial assistance available to students in medicine.

These circumstances weaken the appeal of medical education at a time when it is predicted that the national population will be increased by as much as 55 million in 15 years.

To help bring the medical profession into a better competitive position for attracting students of the kind needed to make good physicians, the committee proposed two interrelated programs. One of them is a simple plan for giving medical students borrowing power to finance their education once they are enrolled in medical school. The other, a student honors program, is potentially a factor that can be of much greater importance in the recruitment of the kind and the number of students the medical profession would like to prepare for physicianship, for it begins with persons at lower age levels when supposedly they are just making up their minds as to goals and the courses they will have to set to reach them.

The committee wrote the following brief descriptions of these programs:

A *student loan program* designed to alleviate the financial difficulties of medical students and encourage career decisions in favor of medicine by utilizing the principle of a security fund functioning as a cosigning agency to make available through community banks relatively large sums of credit at a low rate of interest to medical students.

A *student honors program* designed to focus attention on careers in medicine, to attract a substantial group of able students to prepare for admission to medical school, and (with a built-in scholarship plan) to assist financially a limited number of outstanding students (selected on a geographic basis) who for financial reasons are unable to pursue an education for a career in medicine.

The usefulness of the loan program is obvious: It has the importance that any sensible plan of financing a need always has.

Perhaps less obvious are some of the resources of the student honors program. The program, as adopted by the House of Delegates, contemplates

a plan that would first present to able secondary school and college students a picture of the great opportunity they could have for the best use of themselves in the profession of medicine, and then would encourage outstanding college students with a sincere interest in a career in medicine to apply for designation as A.M.A. scholars. Some 250 honor scholars would be chosen each year. Besides the honor of being among the elite so designated, the needy among them could qualify to receive A.M.A. scholarships in the form of nonrefundable grants of a thousand dollars a year for four years in medical school. It is anticipated that the A.M.A. would make available $50,000 for such awards the first year, $100,000 the second, $150,000 the third and $200,000 the fourth year and thereafter.

Obviously not all of the honor scholars will need the money award, nor will the money be of paramount importance to either the students or to the uses to which the medical profession can put this part of the plan.

Of far greater importance is the esprit de corps that can be developed among the recipients of the honor. More, the opportunities that representatives of medicine will have to deal with educational leaders, with faculty advisors and with the undergraduates themselves in the description and administration of this program should be very helpful in the recruitment of the exceptional students needed to extend the advances of medical science.

It is to be hoped that the action of the A.M.A. will stimulate other medical organizations—state and county societies, for example—to give local support to the A.M.A. plan or to devise their own programs to be used in their own communities for recruitment of students of high standing. They might well find ways to provide counsel and preceptorship for local young people who are good candidates for medical education. Perhaps even nonmedical community service clubs will give special attention to students of their community who are chosen as A.M.A. honor scholars.

One unimportant but pleasant dividend that comes from the A.M.A.'s action is that it gives rest to the slander, still occasionally heard, that the practitioners of medicine seek to limit the number of new physicians.

Quite apart from the results to be expected of this program adopted by the House of Delegates, the medical profession can take warm pride in the fact that it has acted in its traditional acceptance of a substantial share of the responsibility for the recruitment and education of its successors.

Letters to the Editor...

Your editorial, Relative Value Study, in the October issue of CALIFORNIA MEDICINE, properly gives all due credit to the California Medical Association's major role in promulgating, demonstrating, and disseminating this sensible and important way of relating physician's fees for various services to one another.

Your members who worked out the original 1956 schedule may recall that a fairly complete relative value schedule drawn up by a committee of the Hawaii Medical Association in 1948, under the chairmanship of Dr. Steele F. Stewart, was given to Dr. William L. Bender in San Francisco for such use as the California Medical Association might wish to make of it. It had already been printed, but the Honolulu County Medical Society had achieved a sort of immortality by rejecting it on October 29, 1948, by a vote of 45 to 4, with 45 abstaining. It was rejected not on its merits but as a consequence of an internecine quarrel.

The schedule, which was the brain child of Dr. Stewart, was formulated by a committee consisting of Drs. F. J. Pinkerton, Joseph E. Strode, Joseph Palma and Louis Gaspar. It expressed all fees in relative unit values, with a conversion factor which was intended to rise with the federal cost-of-living index.

As someone has said: Nothing is more powerful than an idea which is expressed at the right time.

Sincerely yours,

HARRY L. ARNOLD, JR., M.D.

Honolulu

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Minutes of the 463rd Meeting of the Council, Los Angeles, Biltmore Hotel, October 22, 1960.

The meeting was called to order by Chairman Sherman in Conference Room No. 8 of the Biltmore Hotel, Los Angeles, on Saturday, October 22, 1960, at 9:30 a.m.

Roll Call:

Present were President Foster, President-Elect Bostick, Editor Wilbur, Speaker Doyle and Councilors MacLaggan, Wheeler, Todd, Quinn, O'Neill, Kirchner, O'Connor, Rogers, Dalton, Murray, Davis, Miller, Sherman, Morrison, Anderson and Teall. Absent for cause, Vice-Speaker Heron, Secretary Hosmer and Councilors Shaw and Campbell.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Thomas, Clancy, Collins, Marvin, Whelan and Tobitt and Drs. Batchelder and Miller of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; Eugene Salisbury of the Public Health League; county executives Scheuber of Alameda-Contra Costa, Geisert of Kern, Field of Los Angeles, Grove of Monterey, Somerville of Napa, Bannister of Orange, Brayer of Riverside, Dochterman of Sacramento, Donmyer of San Bernardino, Nute and Burris of San Diego, Neick of San Francisco, Thompson of San Joaquin, Wood of San Mateo, Donovan of Santa Clara, Dermott and Brown of Sonoma, Blankfort of Marin; Dr. Malcolm Merrill, director, and Dr. H. C. Pulley, associate director, of the State Department of Public Health; Dr. Daniel Blain, State Director of Mental Hygiene; Mrs. Eunice Evans of the State Department of Social Welfare; Richard Lyon and Etchel Paolini of California Physicians' Service; Dr. Stafford Warren, dean of University of California at Los Angeles School of Medicine; Doctors Clyde L. Boice, Dan O. Kilroy, Malcolm Watts, Douglas Donath and others.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 462nd meeting of the Council, held in San Francisco on September 10, 1960, were amended and approved.

2. *Membership:*

(a) A report of membership as of October 19 was presented and ordered filed.

(b) On motion duly made and seconded, 21 delinquent members whose dues had been received since September 10, 1960, were voted reinstatement.

(c) On motion duly made and seconded in each instance, 14 applicants were elected to Associate Membership. These were: Henry W. Daine, C. Henry Murphy, Alameda-Contra Costa County; Wesley Michael Groves, Leonard P. Haber, Lillian Hall, Arthur J. Riesenfeld, Los Angeles County; Richard Handy, Napa County; Robert S. Livingston, San Bernardino; Donald H. Robinson, San Francisco; Carr Eugene Bentel, Stanislaus County; Elwood V. Boger, Geza Schinagel, Joan H. Shalack, Walter R. Townsend, Ventura County.

(d) On motion duly made and seconded in each instance, six members were voted Retired Member-

ship. These were: Bruce M. Stephens, Alameda-Contra Costa County; Benjamin Goldberg, J. Mark Lacey, Bernard L. Wyatt, Los Angeles County; Gwendolyn Campion, Marin County; Harry G. Huffman, Orange County.

(e) On motion duly made and seconded in each instance, the dues of 19 members were reduced because of prolonged illness or postgraduate study.

3. *County Officers' Conference—1961:*

Councilor Todd, chairman of an ad hoc committee, reported on plans being discussed for the 1961 conference of county society officers. The date has been set for February 11, 1961, with the possibility of utilizing two days for the session. A further report is to be made.

4. *Governor's Conference on Health:*

Mr. Hassard and Doctors Watts and Kirchner reported on the Governor's Conference on Health, held in Sacramento October 3 and 4. The report of this conference will become a part of the information for the President's Conference on Health, to be held in Washington in January, 1961.

5. *Medical Schools:*

Dr. Stafford L. Warren, dean of the University of California at Los Angeles School of Medicine, discussed the need for training additional physicians in California and pointed out the various factors which may affect the cost of training physicians.

Doctor Malcolm Watts, Associate Dean of University of California School of Medicine, also discussed the cost factors and the fact that a medical school also trains nurses, technicians and others, as well as conducting research activities.

6. *State Department of Mental Hygiene:*

Doctor Daniel Blain, State Director of Mental Hygiene, thanked the Council for its support and expressed the wish to continue liaison with the Committee on Mental Health and other appropriate committees, especially in advance of the 1961 session of the State Legislature.

7. *State Department of Public Health:*

Doctor Malcolm Merrill, State Director of Public Health, introduced Doctor H. C. Pulley, newly appointed Assistant Director of the Department.

Doctor Merrill reported that allocations of $8,318,624 in federal funds had been made for hospital and allied construction, including funds for ten general hospitals, three neuropsychiatric institutions, two nursing homes, two diagnostic and treatment facilities, five health centers and two rehabilitation facilities. State funds will match federal funds in this program.

He also reported that the department was continuing its pressure for poliomyelitis vaccinations with Salk vaccine, that it was working with the State Department of Social Welfare on the preparation of standards to be used in evaluating facilities for rehabilitation programs and was working with the Governor's committee studying agricultural chemicals.

8. *State Department of Social Welfare:*

Mrs. Eunice Evans, Assistant Director of the State Department of Social Welfare, reported that new programs to furnish eye care for public assistance recipients had been made effective October 1 and that additional services in dentistry will be in effect on November 1. She also stated that there were many unknown factors in the prospective plans for medical services for medical indigents but that it was estimated that the demand would be for acute, rather than chronic, conditions. Mrs. Evans also reported that the department was looking into the possibility of a prepayment plan for the care of this group.

9. *Public Relations:*

Doctor Malcolm Watts, Chairman of the Committee on Public Relations, requested authority to retain Mr. Larry Williams as producer of television programs for the committee. On motion duly made and seconded, this authority was voted.

Doctor Watts also reported that the committee and Mr. Williams had agreed that if the television programs are marketed in other areas, the Association is to retain ownership rights and the first receipts from such sales are to be used to reimburse the Association and the producer for their costs. Funds in excess of these costs would then be distributed two-thirds to the Association and one-third to the producer. On motion duly made and seconded, this arrangement was approved.

Doctor Watts and Doctor Douglas Donath, chairman of the steering committee for public relations, discussed the approach approved by the committee, utilizing the District Councilor, his appointee to the steering committee and the staff coordinator. In response to a question on the adequacy of staff, Mr. Hassard pointed out that all staff executives have been assigned to specific areas of the state and were available to assist in the public relations work in their areas.

On motion duly made and seconded, it was voted that the Public Relations Steering Committee as such be discharged and that a new subcommittee of the Committee on Public Relations be formed on the following bases: (1) that it function to encourage and assist county societies to activate specific

public relations programs at the county level, (2) that the membership of this subcommittee be selected by the District Councilors in collaboration with the Chairman of the Council, the Chairman of the Committee on Public Relations and the Chairman of the present Steering Committee, and (3) that the membership be adequate to accomplish this purpose in each Councilor District.

10. *Mental Health:*

Councilor Teall reported, as chairman of an ad hoc committee, that he had attended a hearing called by the State Director of Mental Hygiene, to evaluate the responsibilities of the counties for mental health care under the terms of existing state legislation (Short-Doyle).

11. *Financial:*

In behalf of the Finance Committee, Mr. Hunton presented and discussed several financial reports, including balance sheets of the Association and allied organizations, operating statements for the first three months of the fiscal year and projections of cash positions for all these organizations to the end of the calendar year. He also reported that a new corporation was being formed to handle publications of the Association. On motion duly made and seconded, it was voted to refer this last proposal to the Finance Committee, together with questions regarding reimbursement of representatives at official health conferences.

12. *Committee on Committees:*

Chairman Bostick of the Committee on Committees presented several appointments approved by the committee. On motion duly made and seconded in each instance, these appointments were approved. (See page 371).

13. *Commission on Community Health Services:*

Chairman MacLaggan of the Commission on Community Health Services, reported that the Joint Council for the Health Care of the Aged had thanked the Association for its services in inaugurating the council and had offered to share on a pro rata basis any future expenses incurred. On motion duly made and seconded, this offer was referred to the Finance Committee.

On motion duly made and seconded, it was voted to approve in principle the guides prepared by the joint council for the guidance of county medical societies and district dental societies in cooperating with state aid programs and to approve the sending of these guides to the county societies.

Doctor MacLaggan also presented the proposal of the Committee on Traffic Safety whereby automobile seat belts would be made available to members at about half the usual retail cost. On motion duly made and seconded, this proposal was approved.

He also reported that the Guiding Principles for Physician-Hospital Relations had been approved in some counties with some enforcement sections deleted. It was pointed out that for these principles to be effective in providing self-government in this field, a statewide, uniform acceptance was essential.

Doctor MacLaggan also presented a set of guides for physicians participating in the activities of voluntary health agencies. On motion duly made and seconded, these guides were approved in principle.

14. *Ad Hoc Committee on Continuing Education and Scientific Activities*

Chairman Wilbur gave a progress report on the activities of this ad hoc committee and pointed out some of the areas being studied. A definitive report is expected to be prepared and released prior to the 1961 Annual Session.

15. *California Physicians' Service*

Doctor John G. Morrison reported that California Physicians' Service is experimenting in (1) the provision of home nursing care as an alternative to extended hospital stays, using Riverside County as the pilot area, and (2) the provision of in-patient psychiatric care.

Doctor Morrison also reported that the beneficiary membership, including federal employees and dependents, is now about 980,000 and physician membership is 14,747.

16. *Commission on Public Agencies:*

Chairman Wheeler of the Commission on Public Agencies reported on a health survey being carried on by the U. S. Public Health Service.

Doctor Wheeler also presented a report of the Committee on Other Professions on schools of nursing. The report was received with the understanding that a further report on this subject would be made in January.

Doctor Wheeler also reported that the California Pharmaceutical Association was seeking liaison on proposed legislation relating to the ownership of pharmacies and that this subject had been discussed with Mr. Hassard and with the Committee on Committees. On motion duly made and seconded, it was voted that a liaison committee should be established, under the Committee on Other Professions. The committee will consist of Councilor Miller, chairman, Doctors J. P. Sampson, John B. Lagen, Ralph Weilerstein and a fifth member to be named later.

17. *C.M.A. Staff Report*

Mr. Hassard reported that Mr. Murray Klutch has been employed as research director and will start work about December 1. He also reported that the activities of the Public Relations department had been divided into four sections, two of which will be under the supervision of Ed Clancy and one each under Robert Marvin and William Tobitt.

18. *Legal Department:*

Mr. Hassard reported that the California Supreme Court had affirmed a decision of the appeals court, finding Cutter Laboratories not guilty of wrongful acts but still liable for damages suffered by two minors who had received poliomyelitis vaccine produced by Cutter. He pointed out that this decision is in line with court trends which follow a theory of implied warranty by the producer of items from which others may suffer loss.

19. *Report of the President:*

President Foster reported on the activities of the Governor's Committee on Medical Aid and Health, of which he was a member. The committee's work has now been completed and a report prepared for the Governor. Doctor Foster also introduced to the Council Doctor Roger Egeberg, chairman of the committee.

20. *Report of the President-Elect:*

President-Elect Bostick presented the question posed by state officials who are considering a uniform schedule of fees to be paid for medical services provided under several state programs and urged that authorization be given to a properly constituted body to discuss this matter with the state officers. On motion duly made and seconded, it was voted that the Committee on Government-Financed Medical Care be empowered to proceed on this matter by presenting to state officials the regional factors developed under the Relative Value Studies as representing the level of fees in common use in various areas of the state.

21. *Committee on Legislation:*

Doctor Dan O. Kilroy, chairman of the Committee on Legislation, reported on several measures proposed by the Board of Medical Examiners for introduction into the 1961 legislative session. On a proposal to permit the board to suspend the license of a physician seeking treatment at a private mental hospital, it was regularly moved, seconded and voted to refer this to the Committee on Legislation and the Committee on Mental Health for their joint consideration.

(Present laws permit the Board to suspend the license of a physician who is committed to a public institution but do not make the same provision where a private hospital is used.)

A proposal to change "internship" to "service in a hospital satisfactory to the Board" was approved for licensing purposes.

Doctor Kilroy also reported on other legislative proposals which are expected to be introduced and on which Association policy has previously been expressed.

22. *New and Miscellaneous Business:*

(a) A resolution from the Los Angeles County Medical Association, urging the use of generic terms in drug prescriptions, was regularly moved, seconded and voted referred to the special committee established under Item No. 16 above.

(b) A resolution from the Los Angeles County Medical Association, relating to proper faculty members for health education in the public schools, was regularly moved, seconded and voted referred to the Committee on School Health.

(c) On motion duly made and seconded, a list of guest speakers for the 1961 Annual Session, as submitted by the Committee on Scientific Work, was approved.

(d) A proposal by Doctor William J. Kerr, retired chief of the Department of Medicine at University of California Medical School, to supply the Association with gavels made of native wood, for presentation to the incoming President, was received and it was regularly moved, seconded and voted to accept this offer with thanks and to invite Doctor Kerr to attend the 1961 Annual Session to make the inaugural presentation.

(e) A request for use of the mailing list in behalf of a hospital facility was presented and on motion duly made and seconded, was denied.

(f) A suggestion for nomination of a California physician for selection as "General Practitioner of the Year" at the A.M.A. meeting was received and it was agreed that time did not permit such nomination to be prepared and forwarded this year.

Time and Place of Next Meeting:

The Chairman announced that the next meeting would be held in San Francisco on December 10, 1960, unless incoming business indicated the desirability of an earlier meeting.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:55 p.m.

SAMUEL R. SHERMAN, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

PROPOSED CONSTITUTIONAL AMENDMENT

One proposed amendment to the Constitution of the California Medical Association was introduced in the 1960 House of Delegates. In accordance with requirements of the Constitution, this proposed amendment must lie on the table for one year, during which time it must be published in two issues of CALIFORNIA MEDICINE.

In the 1961 House of Delegates, this proposed amendment will be reviewed by a Reference Committee and reported back to the House of Delegates with the recommendation of that committee for approval or disapproval.

Proposed amendments to the Constitution may not be amended following their introduction but are voted on in the form in which they are introduced. A two-thirds affirmative vote in the House of Delegates is required for passage.

Author: C. J. Attwood.
Representing: Constitution Study Committee.

Resolved: That Article VIII, Section 3, of the Constitution be amended by deleting the final paragraph of the section, starting with the words "Further, such amendment . . ." and concluding with the words "prior to submission to the House of Delegates for vote." and substituting therefor the following:

"Further, such proposed amendment or amendments shall be referred to the appropriate reference committee, which shall hold hearings on the proposed amendment or amendments during the course of its regular business while the Association is in convention.

"If the proposal or proposals are introduced during the first meeting of the House, hearings shall be held at both the current and the next regular session. In this event, the reference committee shall report at a subsequent meeting of the House at the current session its findings and recommendations on the proposed amendment or amendments; this report shall be solely for the guidance of the reference committee and the House at the regular session at which the amendment or amendments are to be subject to vote. The reference committee at the current session may, with the consent of the author of proposed amendment or amendments, alter, amend or modify the proposed amendment or amendments and offer such altered version at a later meeting during the current session, together with its recommendations thereon.

"If the proposal or proposals are introduced during the second meeting of the House, hearings on them shall be held at the next regular session, prior to their submission to the House of Delegates for vote."

COMMISSION AND COMMITTEE APPOINTMENTS

October 22, 1960

Committee on Scientific Work:

Daniel Morton, Los Angeles, to replace Thomas H. Brem, resigned.

Sub-Committee on Radio, TV and Motion Pictures:

Additional members appointed: Warren L. Bostick, San Rafael; James C. MacLaggan, San Diego.

Advisory Committee to California Medical Assistants Association:

Sanford E. Feldman, San Francisco, to replace Byron L. Gifford, Santa Barbara, resigned. The terms of the men on this advisory committee are to be staggered one- to three-year terms and the committee will be asked for a report prior to the Annual Session.

Committee on Industrial Health:

Additions to the Committee: David D. Holaday, San Anselmo; Carl E. Anderson, Santa Rosa.

Committee on State Medical Services:

William C. Hickey, Sacramento, to replace R. William Draper, deceased.

Inspection Corporation of the Joint Council to Improve the Health Care of the Aged:

CMA representatives appointed: Pierre Salmon, San Mateo; Charles E. Schoff, Jr., Sacramento.

Liaison Committee to the Department of Health, Education and Welfare:

Wilbur G. Rogers, Glendale, to replace Byron Gifford, resigned. Additional members: Gerald W. Shaw, Santa Monica; Donald Rosman, Los Angeles.

Liaison Committee to California Pharmaceutical Association (to be a sub-committee of the Committee on Other Professions):

Albert G. Miller, Chairman, San Mateo; John B. Lagen, San Francisco; J. Philip Sampson, Santa Monica; Ralph W. Weilerstein, San Francisco.

California Medical Association

1961

Annual Session

AMBASSADOR HOTEL • LOS ANGELES

APRIL 30 to MAY 3

- Five Outstanding Guest Speakers
- General Scientific Meetings
- Specialty Scientific Meetings
- Postgraduate Courses
- Medical Motion Picture Symposia
- Technical Exhibits • Scientific Exhibits
- Presidents' Dinner Dance
  Sunday, April 30 • Cocoanut Grove
- House of Delegates
  Opening Session Saturday, 2:00 p.m., April 29
  Sunday, April 30, Tuesday Afternoon, May 2, and Wednesday, May 3
- Registration Daily
  8:30 a.m. to 5:00 p.m. . . . No Registration Fee

PLEASE MAKE HOTEL ROOM RESERVATIONS ONLY THROUGH C.M.A. OFFICE IN SAN FRANCISCO. USE RESERVATION REQUEST FORM ON PAGE 373.

APPLICATION FOR HOUSING ACCOMMODATIONS

FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the **California Medical Association,** April 30*-May 3, 1961, Los Angeles, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. **All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.**

Ninetieth Annual Session

CALIFORNIA MEDICAL ASSOCIATION

Los Angeles, California

APRIL 30*-MAY 3, 1961

HOTEL ROOM RATES†

	Single	Twin Beds	Suites
AMBASSADOR HOTEL			
3400 Wilshire Boulevard			
Main Building	14.00-24.00	18.00-28.00	40.00-58.00
Garden Studios	22.00-34.00	24.00-36.00	54.00-66.00
CHAPMAN PARK HOTEL			
3405 Wilshire Boulevard	10.00-11.00	14.00-16.00	20.00-28.00
Bungalows		18.00	25.00-28.00
THE GAYLORD HOTEL			
3355 Wilshire Boulevard	9.00-10.00	12.00-15.00	Single: 25.00 Double: 35.00
HOTEL CHANCELLOR			
3191 West Seventh Street	8.00-10.00	12.00	
SHERATON-WEST			
(formerly Sheraton-Town House)			
2961 Wilshire Boulevard	12.50-20.00	17.50	34.00

ALL RESERVATIONS MUST BE RECEIVED BEFORE: APRIL 1, 1961

***April 29: House of Delegates will start with afternoon meeting Saturday, April 29.**

†The above quoted rates are existing rates but are subject to any change which may be made in the future.

CALIFORNIA MEDICAL ASSOCIATION—Dept. 74
693 Sutter Street
San Francisco 2, California

Please reserve the following accommodations for the 90th Annual Session of the California Medical Association, in Los Angeles April 30-May 3, 1961. (House of Delegates members: First meeting of House begins Saturday afternoon, April 29.)

Single Room $..... Twin-Bedded Room $.....

Small Suite $..... Large Suite $..... Other Type of Room $.....

First Choice Hotel..... Second Choice Hotel.....

ARRIVING AT HOTEL (date):..... Hour:..... A.M. ..... P.M.

Leaving (date) ..... Hour:..... A.M. ..... P.M.

Hotel reservations will be held until 6:00 p.m., unless otherwise notified

THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

.....

.....

.....

.....

Individual Requesting Reservations—Please print or type

Officer?..... Delegate?..... Alternate?.....

Name..... County.....

Address..... City and State.....

In Memoriam

CHALEK, JACK I. Died in Los Angeles September 9, 1960, aged 51, of heart disease. Graduate of the University of Minnesota Medical School, Minneapolis, 1938. Licensed in California in 1945. Doctor Chalek was a member of the Los Angeles County Medical Association.

✤

CLARK, WARREN FULLERTON. Died in Palm Springs, October 22, 1960, aged 71, of a heart attack. Graduate of Queen's University Faculty of Medicine, Kingston, Ontario, Canada, 1920. Licensed in California in 1922. Doctor Clark was a member of the Los Angeles County Medical Association.

✤

COLBY, ELLIOTT GILLETTE. Died in New York, November 8, 1960, aged 63. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1922. Licensed in California in 1922. Doctor Colby was a member of the San Diego County Medical Society.

✤

DRAPER, RUE WILLIAM. Died October 16, 1960, aged 39. Graduate of the University of Edinburgh Faculty of Medicine, Scotland, 1943. Licensed in California in 1952. Doctor Draper was a member of the Sacramento Society for Medical Improvement.

✤

FERGUS, LEROY CLARK. Died in Los Banos, July 19, 1960, aged 50, of coronary thrombosis. Graduate of the Medical College of Virginia, Richmond, 1935. Licensed in California in 1947. Doctor Fergus was a member of the Merced County Medical Society.

✤

GARRISON, EVERETT JESSE. Died in Riverside, September 28, 1960, aged 63. Graduate of the University of Nebraska College of Medicine, Omaha, 1933. Licensed in California in 1936. Doctor Garrison was a member of the Riverside County Medical Association.

✤

GOODMAN, MAX. Died in Los Angeles, October 22, 1960, aged 50. Graduate of Tufts University School of Medicine, Boston, Massachusetts, 1937. Licensed in California in 1946. Doctor Goodman was a member of the San Bernardino County Medical Society.

✤

HARRINGTON, HARREL LEE. Died October 24, 1960, aged 49, of cancer. Graduate of the University of Toronto Faculty of Medicine, Ontario, Canada, 1935. Licensed in California in 1940. Doctor Harrington was a member of the Alameda-Contra Costa Medical Association.

✤

LAUGHTON, J. LAVERNE (JOSEPH L.). Died in Gridley, October 29, 1960, aged 65, of a heart attack. Graduate of the University of Toronto Faculty of Medicine, Ontario, Canada, 1928. Licensed in California in 1929. Doctor Laughton was a member of the San Francisco Medical Society.

✤

MANUEL, DONALD CLYDE. Died in Redding, November 1, 1960, aged 44, of myocardial infarction. Graduate of the University of Louisville School of Medicine, Kentucky, 1946. Licensed in California in 1954. Doctor Manuel was a member of the Shasta-Trinity County Medical Society.

MIDKIFF, LAYTON DUANE. Died in Vallejo, September 8, 1960, aged 46, of heart disease. Graduate of Stanford University School of Medicine, Stanford-San Francisco, 1945. Licensed in California in 1947. Doctor Midkiff was a member of the Alameda-Contra Costa Medical Association.

✤

MORROW, ALLEN. Died September 28, 1960. Graduate of the University of California, Berkeley-San Francisco, 1934. Licensed in California in 1934. Doctor Morrow was a retired member of the Alameda-Contra Costa Medical Association, and the California Medical Association, and an associate member of the American Medical Association.

✤

PARSONS, SUSANNE RING (DOLMAN). Died October 26, 1960, aged 68. Graduate of Johns Hopkins University School of Medicine, Baltimore, Maryland, 1920. Licensed in California in 1929. Doctor Parsons was a member of the Santa Barbara County Medical Society.

✤

RONCOVIERI, LOUIS D. Died in San Francisco, October 21, 1960, aged 69. Graduate of Jefferson Medical College of Philadelphia, Pennsylvania, 1915. Licensed in California in 1915. Doctor Roncovieri was a member of the San Francisco Medical Society.

✤

SCHMIDT, ADELE SOPHIE. Died November 1, 1960, aged 62, of cancer. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1934. Licensed in California in 1934. Doctor Schmidt was a member of the Los Angeles County Medical Association.

✤

THAYER, LYMAN ELANSON. Died in Everett, Washington, October 23, 1960, aged 80. Graduate of the College of Physicians and Surgeons, Los Angeles, 1915. Licensed in California in 1915. Doctor Thayer was a retired member of the San Bernardino County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✤

WALKER, HOMER M. Died in Lompoc, June 18, 1960, aged 78, of cerebral thrombosis. Graduate of Kansas City Medical College, Missouri, 1905. Licensed in California in 1919. Doctor Walker was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✤

WALKER, ROBERT ALLYN. Died in Alhambra, October 7, 1960, aged 69, of pneumonia. Graduate of the University of Illinois College of Medicine, Chicago, 1917. Licensed in California in 1920. Doctor Walker was a member of the Los Angeles County Medical Association.

✤

YOUNG, CALVIN LESSEY. Died in an auto crash in Woodside, October 30, 1960, aged 37. Graduate of the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1951. Licensed in California in 1955. Doctor Young was a member of the San Mateo County Medical Society.

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, State Department of Public Health

INFECTIOUS HEPATITIS in California is on the increase, 4,084 cases having been reported so far this year, some 1,400 cases more than the 2,621 for all 1959. This follows a national trend which has seen an increase in cases annually since 1958.

These cases are spread throughout the state; 1,808 were reported from the Los Angeles metropolitan area, 867 from the San Francisco Bay area, and 497 from San Joaquin Valley.

The fluctuation in number of cases in individual counties is due to localized epidemics in some instances. In Alameda County two outbreaks occurred in housing projects. In Tulare County a number of cases were reported from an Indian reservation. These are isolated instances, however, and do not entirely explain the decided increase in the total of reported cases.

Two questions arise from observations of these data: Are we approaching a new endemic level, similar to 1954? Is the increase real, or is it a reflection of better diagnosis and better reporting?

There have been requests for clarification of the position of this department regarding the recommended dosage of gamma globulin for protection of persons exposed to infectious hepatitis.

Study of the literature discloses conflicting evidence on dosage. Therefore, the State Health Department still urges deferment at this time of any change in the presently recommended dose of gamma globulin used for infectious hepatitis prophylaxis.

* * *

The department's annual influenza surveillance program got under way again this month, with eight local health departments participating in the reporting of school absenteeism and any unusual accumulation of respiratory disease.

Other indices to measure incidence of respiratory disease include absenteeism in selected industries, requests for laboratory tests for influenza, and bed occupancy in selected hospitals.

If experience can be used as a guide, no major influenza epidemics are anticipated this year. An extensive epidemic of influenza type A occurred last season, predominantly in January and February. In the past, major epidemics tended to recur only every second or third season.

* * *

This has been a relatively low-incidence year for arthropod-borne encephalitis, with a total of 12 cases confirmed by laboratory test. Eleven were St. Louis encephalitis and one western viral.

Only twice in the past 15 years, 1948 and 1955, have fewer than 12 cases been reported. This year's cases have occurred in the endemic areas of the state: Imperial Valley, 3 cases; Sacramento Valley, 2; San Joaquin Valley, 7. The only concentration of cases occurred in the vicinity of Fresno between late August and mid-September. Five of eight suspected cases were proved by laboratory tests to be of the St. Louis type.

* * *

The department's chronic disease control program, headed by Dr. Lester Breslow, chief of the Division of Preventive Medical Services, was presented an Albert Lasker Group Award in Public Health at the annual meeting of the American Public Health Association in San Francisco this month.

The award, the highest in public health, was in recognition of a concept, an organization, and a public health physician. It was pointed out that this program, begun in California in 1946, was among the earliest organized programs for the control of chronic disease by an official public health agency in this country.

* * *

The National Institute of Health is soliciting cooperation of private physicians in its new studies of colon and rectal carcinoma. Patients accepted for clinical investigation must be ambulatory; must have normal leukocyte count and renal and hepatic function, and have metastatic lesions in the lung, peripheral lymph nodes or skin.

Physicians having patients whom they wish to be admitted for these studies should communicate with Dr. Clyde O. Brindley or Dr. Paul P. Carbone, National Cancer Institute, Bethesda 14, Maryland.

MEDICAL JURISPRUDENCE

Limited Liability for Directions To Use a Medicine in an "Acceptable" Way

HOWARD HASSARD, *Peart, Baraty & Hassard, General Counsel, California Medical Association, San Francisco*

IN THE CASE of *Gielski v. the State of New York** action was brought against the state for personal injuries sustained by a 25-year-old farmer because of total paralysis below the tenth vertebra, as a result of intraspinal injection by the plaintiff's own physician of tetanus anti-toxin serum, made and distributed to physicians, free of charge, with accompanying instructions, by the State Department of Public Health.

The instructions of the State Department of Public Health distributed with each package of the serum stated that there were three methods for administering the tetanus anti-toxin serum, and that there was a considerable difference of opinion as to which is the more effective route, but that on the basis of reports received, combined intravenous and intraspinal administration appeared to have an advantage.

The plaintiff claimed the state was negligent in making the latter statement. Substantial medical opinion was introduced that the great weight of medical opinion condemned the intraspinal administration of tetanus anti-toxin for therapeutic purposes. The trial court found for the plaintiff, on the basis that the state must be required to keep up with modern medical theories and procedures.

The appellate court reversed the decision and held that medicine is not an exact science, and that there is a difference of respectable, medical opinion as to the most effective method to administer tetanus anti-toxin serum. The court further stated:

"The record demonstrates that medical opinion and medical textbooks differ on the subject. By honestly accepting one field of responsible medical opinion, though others, and perhaps more numerous, medical opinions may differ, does not constitute negligence simply because in a particular case the result was disastrous. To hold the state liable under the circumstances presented here would mean that either the state must render no public service at all, or be an insurer against any bad results that might follow . . ."

The court further pointed out that there is no authority that a physician, whether employed by the state, or in a private practice, must use what some physicians consider the best method if a method which is accepted by respectable medical authority is adopted.

*200 NYS (2d) 691.

Implied Warranty of a New Medicinal Agent

POLIOMYELITIS was contracted by two children, Anne Gottsdanker and James Phipps, shortly after they had been inoculated with Salk vaccine manufactured by Cutter Laboratories. The vaccine administered to each child was purchased by their physician from a pharmacy in a sealed container.

An action for damages was brought in behalf of each child against Cutter Laboratories, the plaintiffs contending that Cutter's vaccine caused the illness it was designed to prevent. The physicians who injected the vaccine were not sued.

Jury verdicts were returned in favor of the two children for a total of almost $150,000. (Gottsdanker, et al. v. Cutter Laboratories, 182 A.C.A. 696.)

There was substantial evidence that the vaccine contained live virus of poliomyelitis and that it actually and directly caused the plaintiffs to contract poliomyelitis.

The case presented to the jury was based on three theories of "causes of action." One was an allegation of negligence in manufacture, the second was breach of an implied warranty of merchantability and the last was breach of implied warranty of fitness for the intended purposes.

When the jury returned its verdict, it reported first that Cutter Laboratories was not negligent. But it found for the plaintiffs on the grounds there was a breach of warranty since the vaccine caused them to have poliomyelitis.

The case was appealed primarily to present the question whether the law relating to implied warranties of merchantability and of fitness apply under the facts of this case.

The appellate court, noting that in California both the seller and the manufacturer imply warranty of

the suitability of human food products to the ultimate consumer, decided that the "vaccine is intended for human consumption quite as much as is food." Even though warranties ordinarily run with a contract of sale from the manufacturer to the purchaser or consumer, the court held that in cases of food and drugs the warranties are for the benefit of the person whom the manufacturer intended to be and who in fact became the consumer.

It was contended by the appellants that public policy would best be served by denying recovery in warranty with regard to new drugs, for the action of such drugs could not always be certainly known. The court said that this argument might have merit if the question were only as to whether a new medicine would cure or a new vaccine prevent, but that this argument could not relieve the manufacturer or seller of implied warranty that the product is fit or safe for human consumption.

It is suggested that basically the Cutter decision is one more step in the social trend that has been developed and evolved in judicial opinions during the past two decades to impose liability on someone, regardless of fault, wherever an individual suffers severe personal injury. This concept is motivated by many factors and shared or accepted by a large proportion of people besides many lawyers and judges.

With the large number of biologics, chemicals, pesticides, additives and other new substances being offered on the market each year, it is apparent that private and governmental testing and protective screens cannot always insure complete protection. The public and physicians will rely also upon the experience, reputation and stability of the manufacturer of products used and consumed.

HOWARD HASSARD

NEWS & NOTES

NATIONAL · STATE · COUNTY

ALAMEDA

Dr. David J. Dugan was installed as president of the Alameda-Contra Costa Medical Association at the annual meeting in November. Dr. Dan Tucker was elected vice-president, and Dr. Harold Kay, secretary-treasurer.

Elected as delegates to California Medical Association House of Delegates were: Drs. Paul Cronenwett, Charles Dimmler, John Morrison, Bernard Gadwood, Charles D. Anderson, Robert Leet, Samuel Etheredge, Byron Royce, Ralph Kirk, Harold Harvey, Donald Dodds, H. Harvey Peterson and J. Brandon Bassett.

KERN

Dr. Harold C. Freedman, Shafter, was elected president-elect of the Kern County Medical Society to succeed Dr. Carrol W. Goss, Lamont, who will be installed as president of the society on January 17. Dr. Thomas V. Reese was elected vice-president, and Dr. Hans E. Einstein secretary-treasurer.

Delegates elected by the Kern County society to the House of Delegates of the California Medical Association were the following physicians: John E. Vaughan, R. A. Patrick and Robert L. Day.

LOS ANGELES

The National Institutes of Health have announced an additional $168,712 was awarded to the **College of Medical Evangelists** during the fiscal year 1960 as training grants, research fellowships and traineeships, bringing the total to $659,374.

The additional grants were made up of two on the Loma Linda campus totaling $31,752 and of seven grants on the Los Angeles campus for $136,960.

* * *

The Research Study Club of Los Angeles will hold its Thirtieth Annual Mid-Winter Clinical Convention in Ophthalmology and Otolaryngology at the Statler-Hilton Hotel from January 23 to 27, 1961.

SANTA BARBARA

Dr. Albert J. Scherman was reelected chairman of the Santa Barbara County chapter of the California Academy of General Practice at a meeting last month. Dr. Robert McGinnis was elected vice-chairman, and Dr. John Rutten as secretary-treasurer.

SANTA CLARA

Announcement that two new assistant professors of neurology have joined the faculty of **Stanford Medical School** effective December 1 has been made by Dean Robert H. Alway. They are Dr. Gilbert S. Frank, in practice in San Francisco, and Dr. Anthony M. Iannone, until recently at the University of Minnesota.

At the same time it was announced that Dr. John E. Connolly, instructor in surgery, has been promoted to assistant professor of surgery.

GENERAL

Orders for more than 5,000 copies of the new edition of the California Medical Association's **Relative Value Study** have been received at the association's headquarters since announcement of the 1960 revision and distribution of it to the 17,000 C.M.A. members.

The orders for the new edition of the Study, which was developed for use as a guide to the relative amount of time and skill required of physicians for the various medical and surgical procedures, have come from state and county medical associations in this country and abroad, from insurance companies, hospital administrators, welfare agencies, and from individual physicians and groups outside the state who provide medical care or have an actuarial interest in the relative value of items of care. For such orders a charge is made to cover printing and handling costs.

In its press release announcing the distribution of the latest Study, Dr. Samuel Sherman, chairman of the Council, said that the new edition "more adequately reflects changes in the practice of medicine and the development of new procedures and phases of medical practice."

The Study suggests numerical ratios based on a unit of one for a minimal service—such as a complete blood count, a follow-up office visit or removing a foreign body from the surface of an eye. As procedures become more complex they increase proportionately in numerical value. As an example, removing an appendix is considered 40 times more complex a procedure than removing something on the surface of the eye.

No arbitrary dollar value is placed on the basic unit, such being left to the individual physician should he apply it to his own practice or to agreement with administrators of health plans and health insurance groups, according to Dr. Sherman.

"This dollar value varies throughout the state, depending on such factors as the type of service provided, the type of practice, and the economic standards of the community," he said.

"It must be emphasized, however, that this is *not* a fee schedule, nor is it binding on any physician or organization," he continued.

"We hope, nevertheless, that this revised Study will replace the previous edition for the guidance of insurance companies in setting their indemnities, that insured groups will use it to measure the adequacy of the coverage for which they pay their premiums and that it will help to protect the insured patient."

In general, higher numerical values are represented in the new Study, much of this due to increased services relative

to surgical procedures (which comprise nearly 80 per cent of the total), according to Dr. Sherman.

Previously, the relative value studies considered only two weeks of postoperative care. In actual practice, aftercare ranges from none to that covering a period of several months.

"The present proposals now account for specific postoperative periods for each surgical procedure, determined by an extensive survey of surgical practices throughout California," Dr. Sherman said. "This provides for an all-inclusive arrangement that in some instances means additional service, in some it means less and in others it means no change."

The result is a net increase in the numerical values of surgical procedures, it was explained. Medical services, on the other hand, underwent little change except for purposes of clarification and for recognition of the important role played by those specializing in internal medicine, according to Dr. Sherman.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Clinical Traineeships — Anesthesia, Dermatology and Pediatric Cardiology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Mexico—Clinical Postgraduate Program (sessions to be held in Mexico City, Guadalajara and Acapulco). January 7 through 22. Twenty-four hours. Fee: $125.00.

Bedside Clinics (Harbor Hospital, Torrance). Thursdays, January 12 through March 30. Twenty-four hours. Fee: $50.00.

An Evaluation of Librium. Saturday, January 14. Eight hours. No fee.

Below-Knee Prosthetics. Monday through Friday, January 23 through 27. Enrollment limited to 20. Fee: $125.00.

Fractures (Lecture and Dissection). Friday through Sunday, February 24 through 26. Eighteen hours.*

Retinal Surgery. Thursday and Friday, March 2 and 3. Twelve hours.*

Management of Pain by Therapeutic Nerve Blocks —Harbor Hospital. Friday through Sunday, March 7 through 9. Eighteen hours. Fee: $50.00.

Psychiatry in Medicine. Friday and Saturday, March 10 and 11. Twelve hours. Fee: $15.00 (includes one lunch and one dinner).

Israel—Clinical Postgraduate Program (sessions to be held in Jerusalem and Tel Aviv). April 20 through 28. Thirty-two hours. Fee: $200.00.

Management of Trauma—Harbor Hospital. Friday and Saturday, May 19 and 20. Nine hours.*

Gerontology. Friday and Saturday, May 19 and 20. Twelve hours.*

Common Emergencies in Clinical Practice. Friday and Saturday, May 26 and 27. Twelve hours. Fee: $40.00.

Dermatology in Clinical Practice. Monday and Tuesday, July 10 and 11. Twelve hours.*

Advanced Seminars in Dermatology (for Dermatologists). Wednesday through Sunday, July 12 through 16. University Conference Center, Lake Arrowhead. Fourteen and one-half hours. Fee: $150.00 (includes room and meals).

Infertility. Friday and Saturday, July 14 and 15.†

Advanced Seminar on Infertility. Sunday through Wednesday, July 16 through 19. University Conference Center, Lake Arrowhead.†

General Pediatrics. Wednesday through Sunday, August 2 through 6. University Conference Center, Lake Arrowhead. Sixteen hours. Fee: $150.00 (includes room and meals).

Endocrinology. Friday and Saturday, August 4 and 5.†

For information on courses for physicians or ancillary personnel *contact:* Thomas H. Sternberg, M.D., assistant dean for Continuing Medical Education, U.C.L.A. Medical Center, Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Vectorcardiography. Saturday, December 17. Seven hours. Fee: $20.00.

Symposium on Eye Problems in Children, Children's Hospital. Saturday, January 14. Seven hours. Fee: $12.50.

Man and Civilization: The Control of the Mind. Saturday through Monday, January 28 through January 30. Twenty-one hours. Fee: $25.00.

Evening Lecture Series at Richmond Hospital. Thursday evenings, February 9 through March 16.†

Pain. Saturday and Sunday, February 11 and 12. Fourteen hours. Fee: $30.00.

Medicine for General Practitioners. Mount Zion Hospital. Monday through Friday, February 20 through 24. Thirty-five hours.*

Pediatric Neurology. Thursday through Saturday, March 2 through 4. Twenty-one hours.*

Urology. Thursday through Saturday, March 9 through 11. Twenty-one hours.*

Perinatal Problems, Children's Hospital. Saturday, March 11. Seven hours. Fee: $12.50.

Diagnostic Radiology. Wednesday through Sunday, March 15 through 19. Thirty-five hours.*

Evening Lecture Series in Medicine, Eden Hospital. Tuesday evenings, April 4 through May 23.†

Laboratory Investigation of Endocrine Disorders. Friday through Sunday, April 7 through 9. Twenty-one hours.*

General Surgery. Thursday through Saturday, April 13 through 15. Twenty-one hours.*

*Fee to be announced.
†Hours and fees to be announced.

Ear-Nose-Throat. Thursday through Saturday, May 11 through 13. Twenty-one hours.*

Proctology. Thursday through Saturday. May 18 through 20. Twenty-one hours.*

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

For information on courses for physicians or ancillary personnel *contact:* Seymour M. Farber, M.D., assistant dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

PRESBYTERIAN MEDICAL CENTER, SAN FRANCISCO

Hematology and Cancer Chemotherapy. Saturday, January 7. Eight hours. Fee: $25.00.

Common Problems in Pediatrics. Sunday, January 29. Eight hours. Fee: $25.00.

Dermatologic Therapy. Saturday, February 11. Eight hours. Fee: $25.00.

Diabetes and Thyroid Disease: Current Methods in Diagnosis and Treatment. Saturday, February 25. Eight hours. Fee: $25.00.

The Four R's of Fractures: Recognition, Reduction, Retention, Rehabilitation. Saturday, March 11. Eight hours. Fee: $25.00.

Problems in Therapy of Cardiac Disease. Sunday, April 9. Eight hours. Fee: $25.00.

Problems in Neurology and Neurosurgery. Saturday, May 6. Eight hours. Fee: $25.00.

Psychological Problems in General Practice. Sunday, May 21. Eight hours. Fee: $25.00.

Horizons in Surgery. Saturday, June 17. Eight hours. Fee: $25.00.

Note:

Each one of 10 conferences listed above	$ 25.00
The complete series of 10 conferences	150.00
A series of any 5 conferences	100.00

Operable Heart Disease. Friday and Saturday, March 3 and 4.

Conference on Keratoplasty. Wednesday through Friday, March 8 through 10.

General Review Course for Practicing Physicians. Thursday through Saturday. March 16 through 18.

Conference on Strabismus. Wednesday through Friday. July 12 through 14.

Contact: **Arthur Selzer, M.D.,** program committee chairman, Presbyterian Medical Center, Clay and Webster Sts., San Francisco 15.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Recent Advances on Hypertension. Saturday, January 14, 8:00 a.m.-6:00 p.m.

Contact: Lowell A. Rantz, M.D., Associate Dean and Director Postgraduate Medicine, Stanford University School of Medicine, 300 Pasteur Drive, Palo Alto, DAvenport 1-1200.

*Fee to be announced.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Nuclear Medicine:

Part I, January. Fee: $50.00.
Part II, eight weeks. Fee: $350.00.
Part III, twelve weeks. Fee: $350.00.

Clinical Hematology. Saturday and Sunday, February 25 and 26.*

Hawaii Course. August 2 through 18. The USC School of Medicine will offer the 4th Postgraduate Refresher Course to be held in Honolulu and on board the S.S. Matsonia. (As a time and money saver, air travel is also possible.)

Cardiac Resuscitation. Each Wednesday by appointment, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Tuition: $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Contact: Phil R. Manning, M.D., associate dean and director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

SURGICAL ANATOMY (Dissection, Lectures and Demonstrations):

Thorax, Abdomen, Pelvis. Monday and Wednesday, January 4 through April 12. 121 hours. Fee: $125.00.

Head and Neck. Monday and Wednesday, April 19 through May 31. Sixty-three hours. Fee: $75.00.

SURGICAL ANATOMY (Lectures and Demonstrations only):

Thorax, Abdomen, Pelvis. Wednesdays, January 4 through April 12. Twenty-eight hours. Fee: $50.00.

Head and Neck. Wednesdays, April 12 through May 31. Twenty-four hours. Fee: $35.00.

Alumni Postgraduate Convention Refresher Courses, March 12 and 13, on the campus of the College of Medical Evangelists at White Memorial Hospital.

Joint Manipulation. Monday through Friday, March 20 through 24. Twenty hours. Fee: $100.00.

Tropical Public Health. Monday through Friday, April 3 through 28. Fee: $65.00.

Clinical Traineeships available in clinical departments by arrangement with Postgraduate Division and Postgraduate Chairman of department involved. In addition to those listed other traineeships in other departments can be arranged. Eighty hours minimum. Limited enrollment. Begin when individually arranged.

1. **Anesthesia.** Six months. 250 to 300 hours. Fee: $350.00.
2. **Internal Medicine.** Two weeks to nine months.
3. **Pulmonary Diseases** (can be arranged).
4. **Traumatology.** One month. 160 hours. Fee: $125.00.
5. **Urology** (can be arranged).

For information contact: Division of Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33. ANgelus 9-7241, Ext. 214.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE INSTITUTES—1961

Southern Counties, February 2 and 3, El Mirador Hotel, Palm Springs, in cooperation with University of Southern California School of Medicine. *Chairman:* Raymond Tatro, M.D., 1875 North "D" Street, San Bernardino.

West Coast Counties, March 2 and 3, Del Monte Lodge, Pebble Beach, in cooperation with College of Medical Evangelists. *Chairman:* A. F. Kandlbinder, M.D., 835 Cass Street, Monterey.

North Coast Counties, March 23 and 24, Flamingo Hotel, Santa Rosa, in cooperation with University of California, San Francisco. *Chairman:* Milton A. Antipa, M.D., 50 Montgomery Drive, Santa Rosa.

San Joaquin Valley, April 14 and 15, Ahwahnee Hotel, Yosemite, in cooperation with UCLA School of Medicine. *Chairman:* J. Malcolm Masten, M.D., 1051 R Street, Fresno.

Sacramento Valley Counties, June 29 and 30, in cooperation with Stanford University School of Medicine, Tahoe Tavern, Lake Tahoe. *Chairman:* Joel T. Janvier, M.D., 3632 Marysville Road, Del Paso Heights.

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AUDIO-DIGEST FOUNDATION

A nonprofit subsidiary of the C.M.A., offers (on a subscription basis) a series of six different hour-long tape recordings covering general practice, surgery, internal medicine, obstetrics and gynecology, pediatrics and anesthesiology. Designed to keep physicians posted on what is new and important in their respective fields, these programs survey current national and international literature of interest and contain selected highlights of on-the-spot recordings of national scientific meetings, panel discussions, symposia, and individual lectures. For information contact Mr. Claron L. Oakley, Editor, 1919 Wilshire Blvd., Los Angeles 57, HUbbard 3-3451.

Medical Dates Bulletin

JANUARY MEETINGS

Los Angeles County Heart Association Mid-Winter Symposium. January 11. Statler Hilton Hotel, Los Angeles. *Contact:* H. T. Siegel, LACHA, 2405 W. 8th Street, Los Angeles.

Long Beach Heart, Cancer and TB Third Annual Medical Symposium on Diseases of the Heart, Lungs and Chest. January 18, 12:30 p.m., Long Beach Petroleum Club. *Contact:* Leslie R. Raymond, executive director, 2034 Pacific Avenue, Long Beach.

Los Angeles Trudeau Society and The Tuberculosis and Health Association of Los Angeles County 8th Biennial Chest Disease Symposium. January 18 through 20. Ambassador Hotel, Los Angeles. *Contact:* Richard S. Gaines, 1670 Beverly Blvd., Los Angeles 26, California.

Western Pharmacology Society Annual Meeting. January 22 through 24. Miramar Hotel, Santa Monica. *Contact:* Howard R. Bierman, M.D., President, 9730 Wilshire Blvd., Beverly Hills.

Thirtieth Annual Mid-Winter Convention in Ophthalmology and Otolaryngology. January 23 to 27. Statler-Hilton Hotel, Los Angeles. *Contact:* Norman Jesberg, M.D., treasurer, 500 South Lucas, Los Angeles 17.

Western Society for Clinical Research. January 26 through 28. Carmel-by-the-Sea, Calif. *Contact:* William N. Valentine, M.D., secretary-treasurer, UCLA School of Medicine, Los Angeles 24.

Fresno County Heart Association Ninth Annual Central California Cardiovascular Symposium. January 27. 8:30 a.m. to 5:30 p.m. Fresno Elks Club, 5080 E. Kings Canyon Road, Fresno. *Contact:* Jack J. Jacobson, M.D., chairman, Professional Services Committee, 1584 N. Van Ness Ave., Fresno.

FEBRUARY MEETINGS

American College of Physicians Southern California Region, Annual Meeting, in cooperation with Northern California and Nevada, Arizona and New Mexico. Biltmore Hotel, Santa Barbara, February 3, 4, 5, 1961. *Contact:* Sherman Mellinkoff, M.D., chairman, scientific program committee, U.C.L.A. Medical Center, Los Angeles 24.

Institute for Metabolic Research "Lipid Metabolism in Diabetes and Related Conditions" two-day round table symposium. February 7 and 8. Highland-Alameda County Hospital, Oakland. *Contact:* L. W. Kinsell, M.D., director, Institute for Metabolic Research, 2701 14th Ave., Oakland.

Obstetrical and Gynecological Assembly of Southern California, 16th Annual Mid-Winter Clinical Assembly. Ambassador Hotel, Los Angeles, February 13 through 17. *Contact:* Dee Davis, executive secretary, 5478 Wilshire Blvd., Los Angeles 36, WEbster 4-1551.

Los Angeles Society of Neurology and Psychiatry in cooperation with California Spinal Cord Research Foundation, Conference "Recent Contributions of Basic Research to Paraplegia." February 17 and 18. Los Angeles. *Contact:* Robert P. Sedgwick, M.D., secretary-treasurer, 2010 Wilshire Blvd., Los Angeles 57.

California Tuberculosis and Health Association, California Trudeau Society Annual Joint Meeting. February 19 through 22, Jack Tar Hotel, San Francisco. *Contact:* Executive director, C.T.H.A., 130 Hayes Street, San Francisco.

Southern California Society of Gastroenterology. "Problems and Pitfalls in Differential Diagnosis of Jaundice"—Leon Schiff, M.D., February 27, Los Angeles County Medical Association. *Contact:* William E. Molle, M.D., secretary-treasurer, 6221 Wilshire Blvd., Los Angeles 48.

MARCH MEETINGS

Second Low-Beer Memorial Lecture. University of California School of Medicine. March 2, 8:00 p.m. Auditorium-S, Medical Sciences Bldg., U. C. San Francisco. *Contact:* F. Buschke, M.D., Professor of Radiology, University of California Medical Center, San Francisco 22, Calif.

Southwestern Pediatric Society Postgraduate Lecture Series. March 7 and 8, Statler Hotel, Los Angeles. *Contact:* Harry O. Ryan, M.D., secretary, 194 N. El Molino, Pasadena.

Anesthesia Section of Los Angeles County Medical Association 6th Annual Spring Postgraduate Meeting. March 11 and 12. Statler Hilton Hotel, Los Angeles. *Contact:* Thomas W. McIntosh, M.D., 686 East Union Street, Pasadena.

College of Medical Evangelists Annual Alumni Postgraduate Convention. Scientific Assembly, Ambassador Hotel, March 14, 15 and 16. *Contact:* F. Harriman Jones, M.D., general chairman, College of Medical Evangelists, 316 North Bailey Street, Los Angeles 33.

SPRING AND SUMMER MEETINGS

INDUSTRIAL MEDICAL ASSOCIATION. Biltmore Hotel, Los Angeles, April 11 through 13. *Contact:* Leonard Arling, M.D., secretary, The Northwest Industrial Clinic, 3101 University Avenue, S.E., Minneapolis 14.

CALIFORNIA MEDICAL ASSOCIATION Annual Meeting, Ambassador Hotel, Los Angeles. April 30 through May 3. *Contact:* John Hunton, executive secretary, 693 Sutter Street, San Francisco 2; or Ed Clancy, director of public relations, 2975 Wilshire Blvd., Los Angeles 5.

PACIFIC COAST OTO-OPHTHALMOLOGICAL SOCIETY ANNUAL MEETING. April 30-May 4. Riviera Hotel, Palm Springs. *Contact:* Al Miller, M.D., Secretary, 500 South Lucas Ave., Los Angeles 17.

HAWAII MEDICAL ASSOCIATION ANNUAL MEETING. May 4-7. Honolulu, Hawaii. *Contact:* Lee McCaslin, Executive Secretary, 510 So. Beretania, Honolulu 13.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS (for members and invited guests). May 10-12. Del Monte Lodge, Pebble Beach. *Contact:* William J. Engel, M.D., Secretary-Treasurer, Cleveland Clinic, 2020 E. 93rd St., Cleveland 6, Ohio.

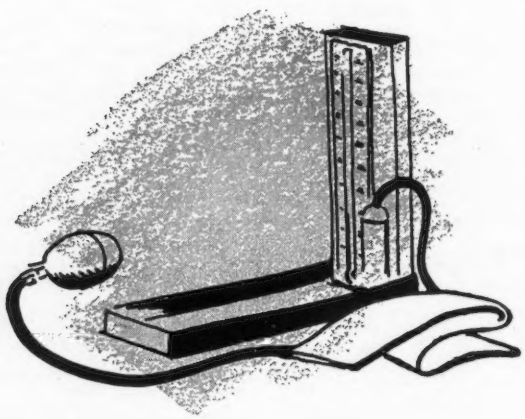
MEDICAL STAFF OF CHILDREN'S HOSPITAL OF THE EAST BAY Ninth Annual Clifford Sweet Seminar. May 18, 19 and 20. Hotel Claremont, Berkeley, and Children's Hospital of the East Bay. *Contact:* Seymour J. Harris, M.D., chairman, Lectureship Committee, 401 29th Street, Oakland 9.

AMERICAN ORTHOPAEDIC ASSOCIATION (members and guests). May 22-25. The Ahwahnee Hotel, Yosemite. *Contact:* Lee Ramsay Straub, M.D., Secretary, 535 E. 70th St., New York 21.

AMERICAN UROLOGICAL ASSOCIATION, INC. May 22-25. Biltmore Hotel, Los Angeles. *Contact:* Mr. William P. Didusch, Executive Secretary, 1120 N. Charles St., Baltimore 1.

MEMORIAL HOSPITAL OF LONG BEACH, Third Annual Medical Staff Symposium. May 24. New Memorial Hospital, 2801 Atlantic Ave., Long Beach 6. *Contact:* George X. Trimble, M.D., secretary, Memorial Hospital of Long Beach.

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION Annual Meeting (joint with U. S.-Mexico Border Public Health Association). June 26 through 29. El Cortez Hotel, San Diego. *Contact:* Robert E. Mytinger, M.P.H., director, Executive Office Western Branch, APHA, 693 Sutter Street, San Francisco 2.



THE PHYSICIAN'S *Bookshelf*

VISUAL AIDS IN CARDIOLOGIC DIAGNOSIS AND TREATMENT—Edited by Arthur M. Master, M.D., and Ephraim Donoso, M.D. Sponsored by the American College of Chest Physicians. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1960. 216 pages, $10.00.

This monograph is an elaboration of the proceedings of the American College of Chest Physicians held on June 6, 1959, presented by a group of investigators from the Mt. Sinai Hospital in New York. The title of the text is somewhat misleading since the material covered is far more comprehensive than merely visual aids. The purpose of the monograph was to present the important principles and use of the newer graphic methods and techniques now available to diagnose, evaluate and treat a patient with heart disease. The rapid progress made in cardiovascular diseases and the new instruments and tools available for studying patients with heart disease make it necessary to periodically review and evaluate the newer techniques. Sixteen chapters by 23 authors cover a wide variety of subjects. These include phonocardiography, dye dilution studies, right and left heart catheterizations, vector cardiography, angiocardiography, selective angiocardiography, as well as chapters on surgical monitoring, anesthesia, the problems of pump oxygenators and postoperative treatment following cardiac surgery. The initial chapter broadly covers "the machine and physician of present day cardiology" and is a good introduction to that which follows. A well-illustrated chapter on the pathologic anatomy of surgically correctible congenital cardiac malformations is most helpful.

The chapters are written by experienced men in their fields, the text is well-illustrated and the material is up to date with a good bibliography at the end of each chapter. Although the coverage is not complete, for which no claim is made by the authors, this symposium is a most useful addition to the cardiac literature and will be of great interest to all physicians interested in being brought up to date on a most important area of medicine. The Mt. Sinai Hospital and the American College of Chest Physicians have collaborated to produce a very worthwhile book.

* * *

NEOPLASMS OF BONE AND RELATED CONDITIONS—Etiology, Pathogenesis, Diagnosis and Treatment—Second Edition—Bradley L. Coley, M.D., Attending Surgeon (Emeritus), Bone Tumor Department, Memorial Hospital for Cancer and Allied Diseases, New York; Paul B. Hoeber, Inc., Medical Division of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y., 1960. 863 pages, with 649 illustrations and 31 tables, $30.00.

Not just a book, this a library crammed with information. Few details, however remotely connected with bone tumors, are left untouched—neoplasms in dinosaurs, amputation techniques, jurisprudence of osseous oncology, x-ray dosage, even rare conditions simulating bone tumors. Illustrations of histological pathology, though stingy in number, are unequivocal in the story they tell.

Such a joy to read. Clear, legible print. Illustrations that really illustrate, and—O, marvel of publishers' art—located on the same page as their discussion. No fine print to try the myopic patience. Bulging bibliographies—also in nonspastic print—document the writer's opinions.

Once started, the reader is reluctant to set down this easily read tome. Although an extra comma here and there would help interpretation of some of the subordinate claused periodic sentences, still in general, the stately style and lucid logic flow smoothly.

The chapter on blood chemistry does not waste a word, and so constitutes a review well worth memorizing. The publisher will not enjoy being reminded that an upside down illustration in a book of this caliber is like hanging the Mona Lisa inverted in the Louvre.

A ray of optimism and hope is injected in this otherwise gloomy subject by the presentation of one or two successful and hence unusual cases at the end of each chapter.

ROBERT P. WATKINS, M.D.

* * *

P-Q-R-S-T—A Guide to Electrocardiogram Interpretation—Fourth Edition—Joseph E. F. Riseman, M.D., Assistant Clinical Professor of Medicine, Harvard Medical School. The Macmillan Company, 60 Fifth Avenue, New York 11, N. Y., 1960. 168 pages, $6.50.

This is the fourth edition of Riseman's guide which was first published in 1944. There is no preface that indicates the reason for the fourth edition and in reviewing the text, one does not find obvious new things that may explain the new edition. For example, there is no account of the newer concepts of left ventricular conduction defects other than left bundle branch block and there is no discussion of the current concepts regarding axis deviation. In fact this is expressly denied when on page 108 it is stated that axis deviation by itself is of no clinical significance. This statement does not take into account the recent work of Grant and others who have shown that left axis deviation exceeding —30° is due to a left ventricular conduction defect or anterolateral myocardial disease. The book is planned for the beginner as a practical guide and in the author's words is not intended to replace the standard textbooks of electrocardiography. The newer texts cover much of the material in this guide and therefore the need which was well filled by this guide in 1944 is less obvious now. The line drawings and the step by step explanations of interpretation are most helpful although some improvement in rendition of the contour of the S-T segment would be desirable. The atlas of electrocardiograms in the rear of the book and their complete interpretation and clinical correlation are sound and valuable.

In general this guide can be recommended as a reliable introduction to the subject for the beginner but will not be sufficient for the individual who wishes to extend his knowledge.

California MEDICINE

INDEX TO VOLUME 93, JULY-DECEMBER, 1960

AUTHOR INDEX

KEY TO ABBREVIATIONS USED

(Or.)—Original Article; (Ed.)—Editorial; (CMA)—California Medical Association; (CR)—Case Report; (I)—Information; (LE)—Letters to the Editor; (PE)—Page End; (MJ)—Medical Jurisprudence.

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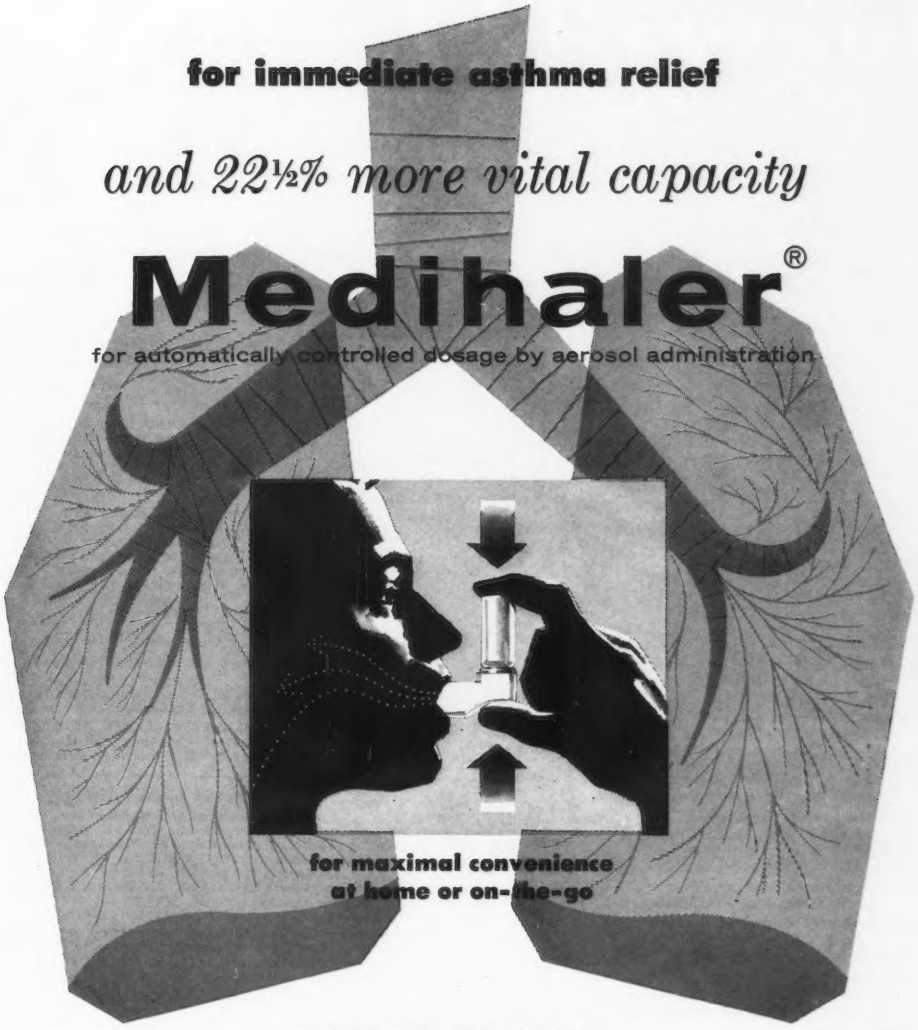

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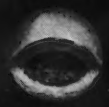

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H. I. Burtness, Santa Barbara....1962
H. M. Ginsburg, Fresno....1962
Donald E. Ross, Los Angeles....1962
Arthur A. Kirchner (Chmn.), Los Angeles....1963
Stanley Moore, San Diego....1963
William F. Quinn, Los Angeles....1963
Rees B. Rees, San Francisco....1963

Committee on Private Practice of Medicine by Medical School Faculty Members

Walter E. Macpherson, Los Angeles....1961
Joseph Telford, San Diego....1961
Werner Hoyt (Chmn.), Mount Shasta....1962
Herbert Moffitt, Jr., San Francisco....1962
Earl J. Boehme, Los Angeles....1963
Frank J. Novak, Menlo Park....1963

* * *

Bureau of Research and Planning

Burt L. Davis, Palo Alto....1961
Paul D. Foster, Los Angeles....1961
James Powell, Stockton....1962
T. Eric Reynolds, Oakland....1962
Donald C. Harrington, Stockton....1963
Gerald W. Shaw (Secy.), Santa Monica....1963
Arlo A. Morrison, Ventura....1964
Francis J. Cox, San Francisco....1964
Lyle Craig, Pasadena....1965
Werner Hoyt (Chmn.), Mount Shasta....1965

* * *

Judicial COMMISSION

Donald A. Charnock (Chmn.), Los Angeles....1961
Albert E. Long, San Francisco....1961
Arlo A. Morrison, Ventura....1961
Floyd O. Due, Oakland....1962
Sam J. McClendon, San Diego....1962
Sidney Shipman, San Francisco....1962
Douglas Campbell, San Francisco....1963
W. Philip Corr, Riverside....1963
L. E. Wilson, Anaheim....1963

* * *

Finance COMMITTEE

Burt L. Davis, Palo Alto....1961
Paul D. Foster, Los Angeles....1961
J. Norman O'Neill, Los Angeles....1961
Ivan C. Heron (Chmn.), San Francisco....1961
Ralph C. Teall, Sacramento....1961

* * *

Special COMMITTEES

Committee on History and Obituaries

Dorothy Allen, Oakland....1961
James Higgins, San Diego....1961
Edgar F. Mauer, Los Angeles....1961
J. Marion Read (Chmn.), San Francisco....1961

Physicians' Benevolence Corporation Operating Committee

C. L. Boice, Los Altos....1961
Ford P. Cady, Los Angeles....1961
Elizabeth Mason Hohl, Los Angeles....1961
Don C. Musser, San Francisco....1961
George Wolf, Fresno....1961

Woman's Auxiliary Advisory Board

Warren L. Bostick, San Rafael....1961
Paul D. Foster, Los Angeles....1961
Matthew N. Hosmer, San Francisco....1961
Samuel R. Sherman, San Francisco....1961
Malcolm C. Todd, Long Beach....1961

Roster—CALIFORNIA COUNTY MEDICAL SOCIETIES

County society secretaries are requested to notify California Medicine promptly when changes are indicated in their roster information

ALAMEDA-CONTRA COSTA Medical Assn., 6230 Claremont Avenue, Oakland 18. Meets third Monday, 8:15 p.m., Hunter Hall, Oakland.
John G. Morrison.....President
333 Estudillo, San Leandro
Stanley Truman.....Secretary
1904 Franklin St., Oakland

BUTTE-GLENN Medical Society. Meets Fourth Thursday.
Rufus C. Rucker.....President
188 E. 5th St., Chico
Jay O. Gibson.....Secretary
170 E. 2nd Ave., Chico

FRESNO County Medical Society, 2155 Amador, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside County Club.
L. J. Snyder.....President
2550 Merced St., Fresno 21
Walter Rohlfing.....Secretary
2155 Amador, Fresno

HUMBOLDT-DEL NORTE County Medical Society. Meets Second Thursday.
Charles Earl.....President
931 1st, Arcata
Don Lowe.....Secretary
730 7th St., Eureka

IMPERIAL County Medical Society. Meets Second Tuesday, 8 p.m., Pioneer Memorial Hospital, Brawley.
Willis Irwin.....President
647 Pine Ave., Holtville
Ernest Brock.....Secretary
200 S. Imperial Ave., Imperial

INYO-MONO County Medical Society. Meets Fourth Tuesday except December, January, February.
C. L. Scott.....President
287 W. Academy Ave., Bishop
Victor H. Hough.....Secretary
Box 175, Lone Pine

KERN County Medical Society, 2603 G Street, Bakersfield. Meets Third Tuesday, 7:30 p.m., Saddle and Sirloin, except June, July, August.
William H. Moore, Jr.....President
1715 28th St., Bakersfield
Harold C. Freedman.....Secretary
406 James St., Shafter

KINGS County Medical Society. Meets Second Monday, 8:00 p.m., Legion Hall, Hanford.
Glen Bean.....President
1105 N. Douty, Hanford
R. W. Burgoyne.....Secretary
210 Heinlen Ave., Lemoore

LASSEN-PLUMAS-MODOC County Medical Society. Meets on call.
William J. Quinn.....President
Medico-Dental Bldg., Alturas
Willard S. Bross, Jr.....Secretary
Western Pacific Hospital, Portola

LOS ANGELES County Medical Assn., 1925 Wilshire Blvd., Los Angeles 57. Meets First and Third Thursdays, 1925 Wilshire Blvd., Los Angeles.
Joseph P. O'Connor.....President
1925 Wilshire Blvd., Los Angeles 57
Ian G. MacDonald.....Secretary
1925 Wilshire Blvd., Los Angeles 57

MADERA County Medical Society.
V. J. Guttormsson.....President
501 E. Yosemite Ave., Madera
Rex Blumhagen.....Secretary
109 South B St., Madera

MARIN County Medical Society, 1703 Fifth Ave., San Rafael. Meets First Thursday, 7:00 p.m.
Dallas L. Wagner.....President
711 D St., San Rafael
Calvin Plumhof.....Secretary
711 D St., San Rafael

MENDOCINO-LAKE County Medical Society.
Neely E. Bradford.....President
P. O. Box D, Boonville
R. B. Smalley.....Secretary
361 S. Main St., Willits

MERCED County Medical Society. Meets Fourth Thursday, Hotel Tioga, Merced.
Bruce McDowell.....President
2448 M St., Merced
Zdenek Fluss.....Secretary
2434 M St., Merced

MONTEREY County Medical Society, P. O. Box 308, Salinas. Meets First Thursday.
LeGrand Woolley.....President
460 Pierce St., Monterey
Osman Hull.....Secretary
1281 Castro Rd., Monterey

NAPA County Medical Society. Meets Second Wednesday, 980 Trancas Street, Napa
Clinton J. Sevener.....President
1735 Jefferson St., Napa
Houghton Gifford.....Secretary
P. O. Box 780, Napa

ORANGE County Medical Association, 1226 N. Broadway, Santa Ana. Meets First Tuesday, 7:00 p.m.
Samuel Gendel.....President
117 North Claudina, Anaheim
William K. Friend.....Secretary
520 W. Seventeenth St., Santa Ana

PLACER-NEVADA-SIERRA County Medical Society. Meets Second Wednesday.
Wilbur C. Overmiller.....President
196 Lincoln Way, Auburn
T. J. Rossitto.....Secretary
1166 High St., Auburn

RIVERSIDE County Medical Association, 4175 Brockton Ave., Riverside. Meets Second Monday, 8:00 p.m., El Loro Room, Mission Inn.
John J. Sheehy.....President
4175 Brockton Ave., Riverside.
Helen Clark.....Secretary
4175 Brockton Ave., Riverside.

SACRAMENTO Society for Medical Improvement, 2731 Capitol Ave., Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.
Richard C. Ripple.....President
1215 28th St., Sacramento
James Dowrie.....Secretary
3430 Balmoral Dr., Sacramento 21

SAN BENITO County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.
Peter E. Jones.....President
471 4th St., Hollister
Robert D. Quinn.....Secretary
P. O. Box 248, Hollister

SAN BERNARDINO County Medical Society, 1875 N. D St., San Bernardino. Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.
Elmer O. Carlson.....President
756 N. Euclid Ave., Ontario
George W. Smith.....Secretary
1374 Waterman Ave., San Bernardino

SAN DIEGO County Medical Society, 3427 - 4th Ave., San Diego 3. Meets Second Tuesday, San Diego Club, 1250 Sixth Ave., San Diego 10.
Chester Tancredi.....President
420 Spruce St., San Diego 3
Milo A. Youel.....Secretary
2290 Sixth Ave., San Diego 1

SAN FRANCISCO Medical Society, 250 Masonic Ave., San Francisco 18. Meets Second Tuesday, 8:15 p.m., 250 Masonic Ave., San Francisco 18.
Roberta F. Fenlon.....President
250 Masonic Ave., San Francisco 18
John B. Schaupp.....Secretary
250 Masonic Ave., San Francisco 18

SAN JOAQUIN County Medical Society. Meets First Thursday, 8:15 p.m., 936 N. Commerce St., P.O. Box 230, Stockton.
C. A. Luckey.....President
445 West Acacia St., Stockton
Dora A. Lee.....Secretary
2420 N. California St., Stockton

SAN LUIS OBISPO County Medical Society. Meets Third Saturday, 7:00 p.m., Anderson Hotel, San Luis Obispo.
Laurence C. Gaebe.....President
895 Pismo St., San Luis Obispo
Alan D. Watson.....Secretary
1130 Garden, San Luis Obispo

SAN MATEO County Medical Society, 122 El Camino Real, San Mateo. Meets Third Tuesday.
Robert O. Holmes.....President
15 Downey Way, Hillsborough
John T. Saidy.....Secretary
1 Baywood Ave., San Mateo

SANTA BARBARA County Medical Society, 300 W. Pueblo St., Santa Barbara. Meets Second Monday, Cottage Hospital.
William R. Johnston.....President
1515 State St., Santa Barbara
H. Vernon Freidell.....Secretary
300 W. Pueblo St., Santa Barbara

SANTA CLARA County Medical Society, 1960 The Alameda, San Jose 26. Meets Third Monday except in July and August.
Paul V. Morton.....President
45 So. 17th St., San Jose
C. Gerald Scarborough.....Secretary
65 No. 14th St., San Jose

SANTA CRUZ County Medical Society. Meets every Second Month, Second Tuesday. Time, place to be announced.
Robert E. Crompton.....President
540 Soquel Ave., Santa Cruz
William Cress.....Secretary
330 Soquel Ave., Santa Cruz

SHASTA-TRINITY County Medical Society. Meets Second Monday, 7:30 p.m., Rite Spot, Redding.
Robert E. Breeden.....President
P.O. Box 456, Weaverville
Vernon R. Gee.....Secretary
1348 Market Street, Redding

SISKIYOU County Medical Society. Meets Sunday on call.
William B. Strickland.....President
P. O. Box 65, 508 Chestnut St., Mount Shasta
Donald L. Meamber.....Secretary
750 South Main St., Yreka

SOLANO County Medical Society. Meets Second Tuesday, 8:00 p.m., at different meeting places.
Elwin W. Midgeley.....President
1512 Napa, Vallejo
William J. Olson.....Secretary
740 Texas St., Fairfield

SONOMA County Medical Society, 304 American Trust Bldg., Santa Rosa. Meets Second Thursday.
Cedric C. Johnson.....President
304 American Trust Bldg., Santa Rosa
Clayton B. Taylor.....Secretary
304 American Trust Bldg., Santa Rosa

STANISLAUS County Medical Society, 303 Downey Ave., Modesto. Meets Third Tuesday of the month, 7 p.m., Hotel Covell, Modesto.
Joseph H. Barr.....President
600 Coffee Road, Modesto
John S. Woolley.....Secretary
808 13th St., Modesto

TEHAMA County Medical Society. Meets at call of President.
A. H. Meuser.....President
304 E. Solano St., Corning
Hugh R. Merhoff.....Secretary
737 Washington St., Red Bluff

TULARE COUNTY Medical Society, 1640 West Mineral King, P. O. Box 16, Visalia.
Lyle E. Osgood.....President
1821 Meadow Lane, Visalia
Wm. D. Clinite.....Secretary
790 North Cherry, Tulare

VENTURA County Medical Society. Meets Second Tuesday, 7:15 p.m., Colonial House, Oxnard.
John P. Pearson.....President
701 No. A St., Oxnard
F. K. Helbling.....Secretary
34 N. Ash St., Ventura

YOLO County Medical Society. Meets First Wednesday.
Woodring Pearson.....President
Woodland Clinic, Woodland
Frederick Sobeck.....Secretary
207 D St., Davis

YUBA-SUTTER-COLUSA County Medical Society, P. O. Box 749, Marysville. Meets Second Tuesday.
Roland K. Iverson.....President
725 4th St., Marysville
Leon M. Swift.....Secretary
P. O. Box 1149, Marysville

(For roster of C.M.A. committees and other organizations, see last month's issue.)

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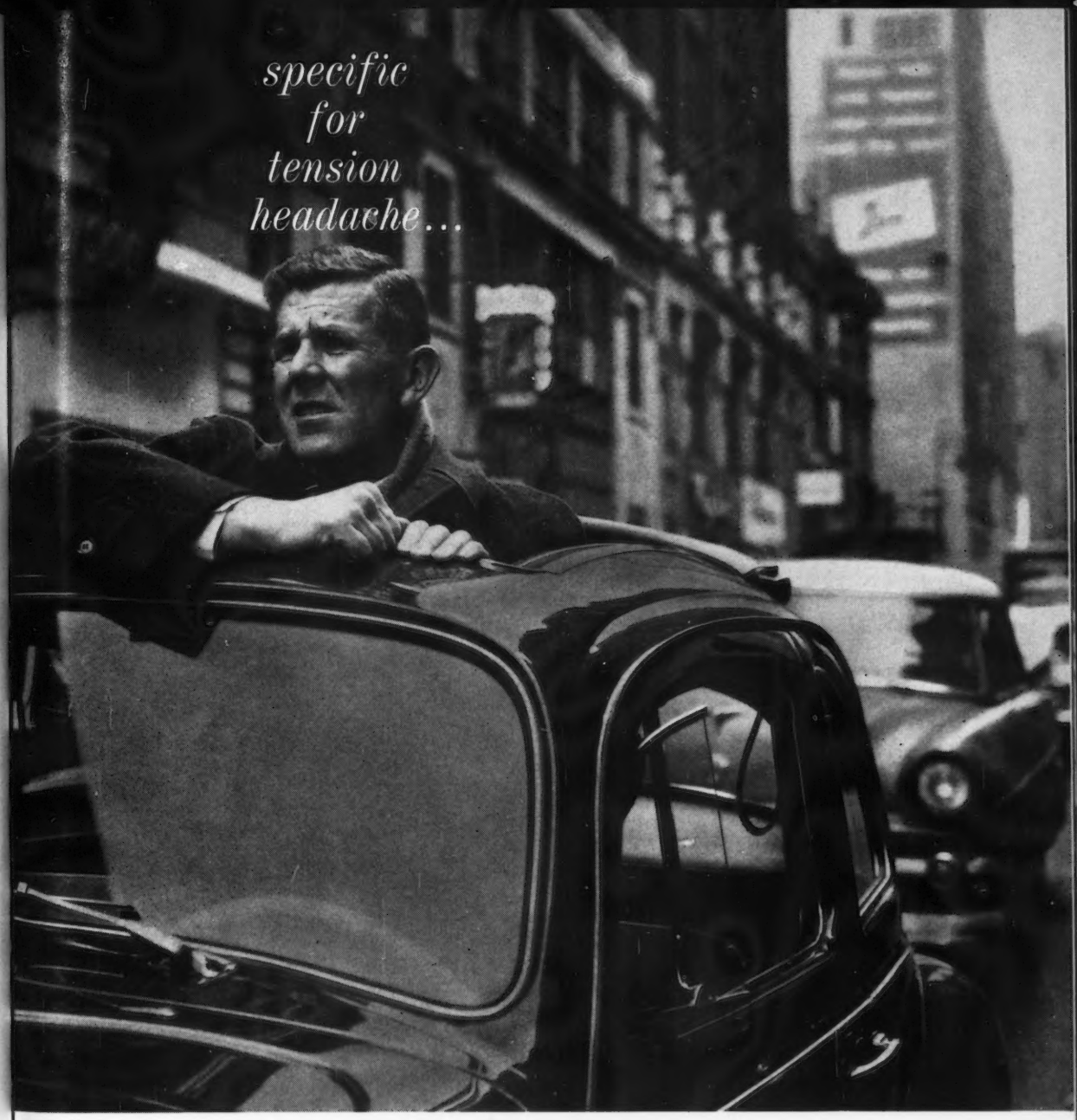

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"We have found caffeine, used in combination with acetylsalicylic acid, acetophenetidin, and isobutylallylbarbituric acid, [Fiorinal] to be one of the most effective medicaments for the symptomatic treatment of headache due to tension."

Friedman, A. P., and Merritt, H. H.: J.A.M.A. *163*:1111 (Mar. 30) 1957.

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Each contains: Sandoptal (Allylbarbituric Acid N.F. X) 50 mg. (3/4 gr.), caffeine 40 mg. (2/3 gr.), acetylsalicylic acid 200 mg. (3 gr.), acetophenetidin 130 mg. (2 gr.).

Dosage: 1 or 2 every four hours, according to need, up to 6 per day.

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"Gratifying" relief from

for your patients with
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other musculoskeletal disorders

POTENT muscle relaxation
EFFECTIVE pain relief
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stiffness and pain

"gratifying" *relief from stiffness and pain in 106-patient controlled study*

(as reported in J.A.M.A., April 30, 1960)

"Particularly gratifying was the drug's [SOMA's] ability to relax muscular spasm, relieve pain, and restore normal movement . . . Its prompt action, ability to provide objective and subjective assistance, and freedom from undesirable effects recommend it for use as a muscle relaxant and analgesic drug of great benefit in the conservative management of the 'low back syndrome'."

Kestler, O.: Conservative Management of "Low Back Syndrome", J.A.M.A. 172: 2039 (April 30) 1960.

FASTER IMPROVEMENT—79% complete or marked improvement in 7 days (Kestler).

EASY TO USE—Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

SUPPLIED: 350 mg., white tablets, bottles of 50.
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Literature and samples on request.

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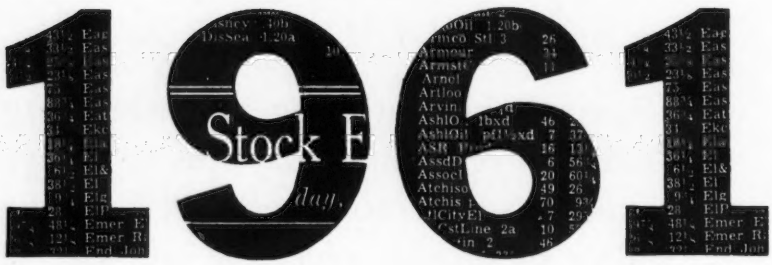

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AMBENYL® EXPECTORANT

AMBENYL EXPECTORANT quickly comforts the coughing patient because it is formulated to relieve all phases of cough due to upper respiratory infections or allergies. Combining Ambodryl®—potent antihistaminic; Benadryl®—the time-tested antihistaminic-antispasmodic; and three well-recognized antitussive agents, AMBENYL EXPECTORANT:

• soothes irritation • quiets the cough reflex • decongests nasal mucosa • facilitates expectoration • decreases bronchial spasm • and tastes good, too.

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Benadryl® hydrochloride (diphenhydramine hydrochloride, Parke-Davis)	56 mg.
Dihydrocodeinone bitartrate	⅙ gr.
Ammonium chloride	8 gr.
Potassium guaiacolsulfonate	8 gr.
Menthol	q.s.
Alcohol	5%

Supplied: Bottles of 16 ounces and 1 gallon.

Dosage: Every three or four hours—adults, 1 to 2 teaspoonfuls; children ½ to 1 teaspoonful. 27160

◈ Exempt narcotic

PARKE, DAVIS & COMPANY
Detroit 32, Michigan

PARKE-DAVIS

Sleepwalkers Should Be Awakened To Avoid Accidents

Sleepwalkers should be awakened from their somnambulant sojourns because they are often victims of accidents.

The popular notion that waking a sleepwalker will cause a harmful shock is debunked in the September *Today's Health* magazine, published by the American Medical Association.

The belief that sleepwalkers, of whom there are an estimated four million in the United States, never injure themselves has been disproved, according to an article in the magazine.

"The fact is that the majority of sleepwalkers fall downstairs, suffer cuts or burns, trip over rugs, and bump their heads against doors," it said. "Many of them have been injured seriously."

The shock of being awakened is no greater to the sleepwalker, psychiatrists say, than his being aroused from normal sleep by someone shaking him.

"Common sense dictates that you wait until the walker moves out of a dangerous position before you awaken him," the article said. "Or remove the danger, if possible, and then gently wake him."

The article also pointed out that reports of sensational feats of sleepwalkers should be viewed with skepticism.

Dr. Ernst Jolowicz, New York psychiatrist, believes claims of superhuman dexterity are nonsense, according to the article. He was quoted as saying that sleepwalkers rarely undertake feats beyond their actual capacities. However, he added that the sleepwalker has no psychological inhibitions and can therefore exert his greatest physiological powers.

Sleepwalkers are "partly awake and partly asleep," the article continued, adding:

"That explains why many chronic sleepwalkers discover that it's no use at all to rig up all sorts of Rube Goldberg contrivances to wake themselves. Even though they do things like bolting the windows and doors or tying themselves to the bed, they are apparently conscious enough to avoid or overcome the very gadgets they have set up as sleepwalking preventatives."

Psychiatrists believe sleepwalking in most cases is a symptom of emotional disturbance, the article said. Generally speaking, it said, it is a kind of "dream in pantomime" in which certain drives or conflicts are acted out.

"Most of us dream quietly in bed," it said. "Sleepwalkers act out their dreams; their behavior during noctambulation seems to be directly related to the dream content and, like the dream, may often be symbolic in expression.

"The best cure for sleepwalking—in child or adult—is to remove the anxiety or anxieties which cause it."

The author of the article is Jack Kaplan.

ANNOUNCING—
SPECIFICALLY FOR
INFECTIONS DUE TO
"RESISTANT" STAPHYLOCOCCI

AN ENTIRELY NEW SYNTHETIC
"STAPH-CIDAL" PENICILLIN

Staphcillin™

sodium dimethoxyphenyl penicillin
FOR INJECTION

UNIQUE—BECAUSE IT
RETAINS ANTIBACTERIAL
ACTIVITY IN THE PRESENCE OF
STAPHYLOCOCCAL PENICILLINASE
WHICH INACTIVATES
OTHER PENICILLINS

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NEW SYNTHETIC PENICILLIN FOR "RESISTANT" STAPH

STAPHCILLIN™

(sodium dimethoxyphenyl penicillin)

For Injection

DESCRIPTION

STAPHCILLIN is a unique new synthetic parenteral penicillin produced by Bristol Laboratories for the specific treatment of staphylococcal infections due to resistant organisms. Its uniqueness resides in its property of resisting inactivation by staphylococcal penicillinase. It is active against strains of staphylococci which are resistant to other penicillins.

Each dry filled vial contains: 1 Gm. STAPHCILLIN (sodium dimethoxyphenyl penicillin), equivalent to 900 mg. dimethoxyphenyl penicillin activity.

INDICATIONS

STAPHCILLIN is recommended as specific therapy only in infections due to strains of staphylococci resistant to other penicillins, e.g.:

Skin and soft tissue infections: cellulitis, wound infections, carbuncles, pyoderma, furunculosis, lymphangitis and lymphadenitis.

Respiratory infections: staphylococcal lobar or bronchopneumonia, and lung abscesses combined with indicated surgical treatment.

Other infections: staphylococcal septicemia, bacteremia, acute or subacute endocarditis, acute osteomyelitis and enterocolitis.

Infections due to penicillin-sensitive staphylococci, streptococci, pneumococci and gonococci should be treated with Syncillin® or parenteral penicillin G rather than STAPHCILLIN. Treponemal infections should be treated with parenteral penicillin G.

DOSAGE AND ADMINISTRATION

STAPHCILLIN is well tolerated when given by deep intragluteal or intravenous injection.

As is the case with other antibiotics, the duration of therapy should be determined by the clinical and bacteriological response of the patient. Therapy should be continued for at least 48 hours after the patient has become afebrile, asymptomatic and cultures are negative. The usual duration has been 5-7 days.

Intramuscular route: The usual adult dose is 1 Gm. every 4 or 6 hours. Infants' and children's dosage is 25 mg. per Kg. (approximately 12 mg. per pound) every 6 hours.

Intravenous route: 1 Gm. every 6 hours using 50 ml. of sterile saline solution at the rate of 10 ml. per minute.

**Warning:* Solutions of STAPHCILLIN and kanamycin should not be mixed, as they rapidly inactivate each other. Data on the results of mixing STAPHCILLIN with other antibiotics are being accumulated.

DIRECTIONS FOR RECONSTITUTION

Add 1.5 ml. sterile distilled water or normal saline to a 1 Gm. vial and shake vigorously. Withdraw the clear, reconstituted solution (2.0 ml.) into a syringe and inject. The reconstituted solution contains 500 mg. of STAPHCILLIN per ml. Reconstituted solutions are stable for 24 hours under refrigeration.

For intravenous use, dilute the reconstituted dose in 50 ml. of sterile saline and inject at the rate of 10 ml. per minute.

*This statement supersedes that in the Official Package Circulars dated September and/or October, 1960.

(continued)

MICROBIOLOGICAL AND PHARMACOLOGICAL PROPERTIES

In vitro studies show that STAPHCILLIN is a bactericidal penicillin with activity against staphylococci resistant to penicillin G. Strains of staphylococci so far tested have been sensitive to STAPHCILLIN *in vitro* at concentrations of 1-6 mcg. per ml. These levels are readily attained in the blood and tissues by administration of STAPHCILLIN at the recommended dosage. This unique attribute is probably due to the fact that STAPHCILLIN is stable in the presence of staphylococcal penicillinase. STAPHCILLIN also resists degradation by *B. cereus* penicillinase. The antomicrobial spectrum of STAPHCILLIN with regard to other microorganisms is qualitatively similar to that of penicillin G; but considerably higher concentrations of STAPHCILLIN are required for bactericidal activity than is the case with penicillin G.

STAPHCILLIN is rapidly absorbed after intramuscular injection. Peak blood levels (6-10 mcg./ml. on the average after a 1.0 Gm. dose) are attained within 1 hour; and then progressively decline to less than 1 mcg. over a 4 to 6 hour period. It is poorly absorbed from the gastrointestinal tract. STAPHCILLIN is rapidly excreted by the kidney.

As shown by animal studies, STAPHCILLIN is readily distributed in body tissues after intramuscular injection. Of the tissues studied, highest concentrations are reached in the kidney, liver, heart and lung in that order; the spleen and muscles show lower concentrations of the antibiotic. STAPHCILLIN diffuses into human pleural and prostatic fluids, but its diffusion into the spinal fluid has not yet been completely studied. However, one patient with meningitis showed a significant concentration in his spinal fluid while on STAPHCILLIN therapy.

Toxicity studies with STAPHCILLIN and penicillin G in animals show that they have approximately the same low order of toxicity.

Certain staphylococci can be made resistant to STAPHCILLIN in the laboratory, but this resistance is not related to their penicillinase production. During the clinical trials, no STAPHCILLIN-resistant strains of staphylococci were observed or developed; the possibility of the emergence of such strains in the clinical setting awaits further observation.

PRECAUTIONS

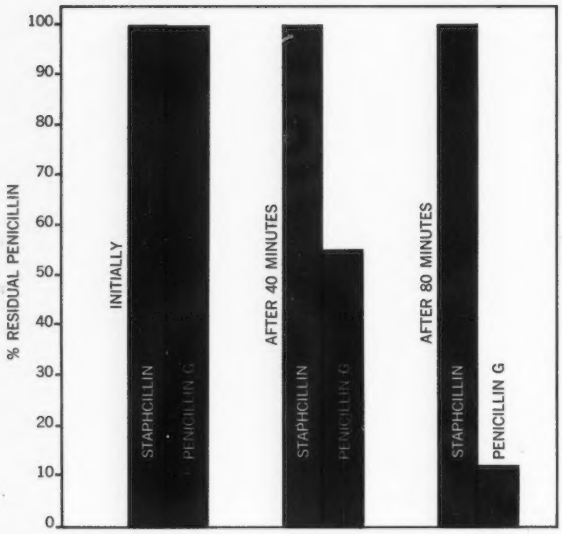
During the clinical trials, several mild skin reactions, e.g., itching, papular eruption and erythema were observed both during and after discontinuance of STAPHCILLIN therapy. Patients with histories of hay fever, asthma, urticaria and previous sensitivity to penicillin are more likely to react adversely to the penicillins. It is important that the possibility of penicillin anaphylaxis be kept in mind. Epinephrine and the usual adjuvants (antihistamines, corticosteroids) should be available for emergency treatment. Because of the resistance of STAPHCILLIN to destruction by penicillinase, parenteral *B. cereus* penicillinase may not be effective for the treatment of allergic reactions. Information with regard to cross-allergenicity between penicillin G, penicillin V, phenethicillin (Syncillin) and STAPHCILLIN is not available at present. If superinfection due to Gram-negative organisms or fungi occurs during STAPHCILLIN therapy, appropriate measures should be taken.

SUPPLY

List 79502 — 1.0 Gm. dry filled vial.

BRISTOL LABORATORIES · SYRACUSE, NEW YORK
Division of Bristol-Myers Company

UNIQUE SYNTHETIC "STAPH-CIDAL" PENICILLIN



In the presence of staphylococcal penicillinase, STAPHCILLIN remained active and retained its antibacterial action. By contrast, penicillin G was rapidly destroyed in the same period of time. *(After Gourevitch et al., to be published)*

Specifically for "resistant" staph...

Staphcillin™

sodium dimethoxyphenyl penicillin
FOR INJECTION

The failure of staphylococcal infections to respond to penicillin therapy is attributed to the penicillin-destroying enzyme, penicillinase, produced by the invading staphylococcus.

Unlike other penicillins:

1 STAPHCILLIN is effective because it retains its antibacterial activity despite the presence of staphylococcal penicillinase.

2 The clinical effectiveness of STAPHCILLIN has been confirmed by dramatic results in a wide variety of infections due to "resistant" staphylococci, many of which were serious and life-threatening.

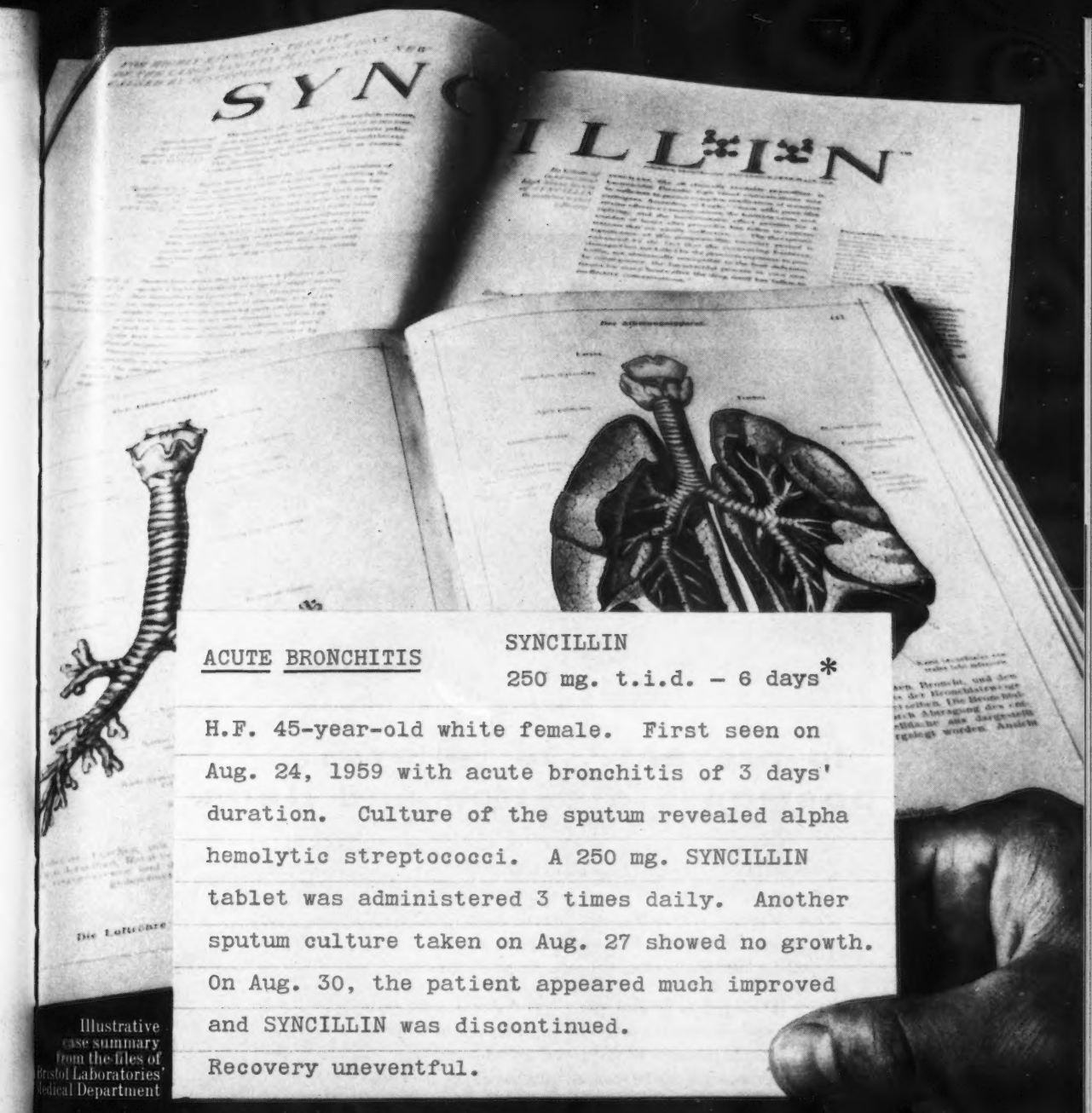
Like other penicillins:

STAPHCILLIN has no significant systemic toxicity. It is well tolerated locally, and pain or irritation at the injection site is comparable to that following the injection of penicillin G. *In occasional cases, typical penicillin reactions may be experienced.*

PROFESSIONAL INFORMATION SERVICE — The attached Official Package Circular provides complete information on the indications, dosage, and precautions for the use of STAPHCILLIN. If you desire additional information concerning clinical experiences with STAPHCILLIN, the Medical Department of Bristol Laboratories is at your service. You may direct your inquiries via collect telephone call to New York, PLaza 7-7061, or by mail to Medical Department, Bristol Laboratories, 630 Fifth Ave., N. Y. 20, N. Y.

BRISTOL LABORATORIES • SYRACUSE, NEW YORK

Division of Bristol-Myers Company



ACUTE BRONCHITIS

SYNCILLIN
250 mg. t.i.d. – 6 days*

H.F. 45-year-old white female. First seen on Aug. 24, 1959 with acute bronchitis of 3 days' duration. Culture of the sputum revealed alpha hemolytic streptococci. A 250 mg. SYNCILLIN tablet was administered 3 times daily. Another sputum culture taken on Aug. 27 showed no growth. On Aug. 30, the patient appeared much improved and SYNCILLIN was discontinued. Recovery uneventful.

Illustrative case summary from the files of Bristol Laboratories' Medical Department

THE ORIGINAL phenethicillin

SYNCILLIN®

(phenoxyethyl penicillin potassium)

FIRST SYNTHESIZED AND MADE AVAILABLE BY BRISTOL LABORATORIES

A dosage form to meet the individual requirements of patients of all ages in home, office, clinic, and hospital:
Syncillin Tablets – 250 mg. (400,000 units)... Syncillin Tablets – 125 mg. (200,000 units)
Syncillin for Oral Solution – 60 ml. bottles – when reconstituted, 125 mg. (200,000 units) per 5 ml.
Syncillin Pediatric Drops – 1.5 Gm. bottles. Calibrated dropper delivers 125 mg. (200,000 units)

Streptococcal infections should be treated for at least 10 days to prevent the development of rheumatic fever and as prophylaxis against bacterial endocarditis in susceptible patients.

Complete information on indications, dosage and precautions is included in the circular accompanying each package.

BRISTOL LABORATORIES, Div. of Bristol-Myers Co., SYRACUSE, N.Y.

DECLOMYCIN®

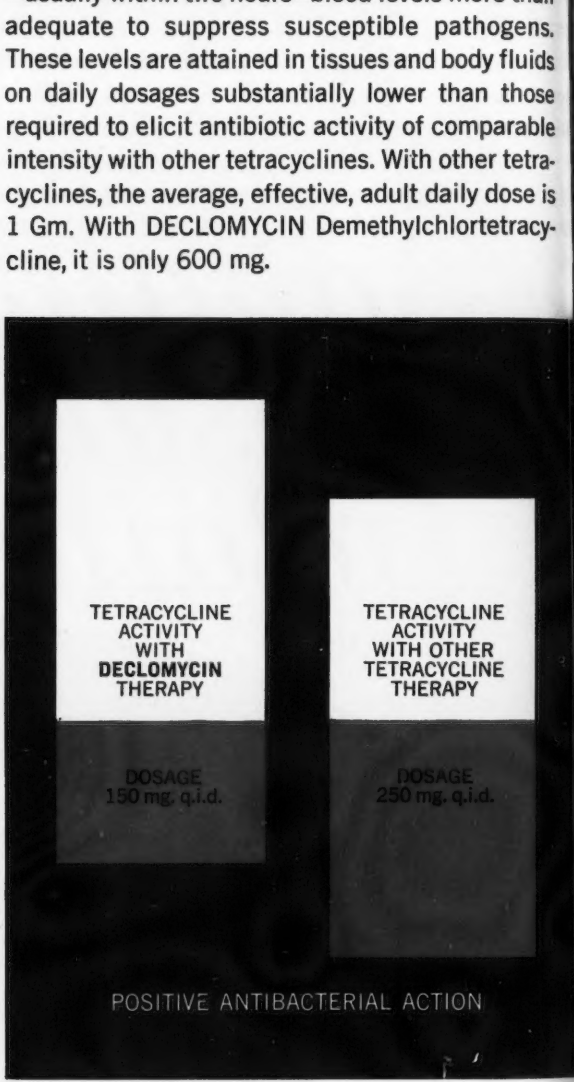
DEMETHYLCHLORTETRACYCLINE LEDERLE

attains
sustains
retains

extra
antibiotic
activity

extra-activity...promptly attained

DECLOMYCIN Demethylchlortetracycline attains —usually within two hours—blood levels more than adequate to suppress susceptible pathogens. These levels are attained in tissues and body fluids on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. With other tetracyclines, the average, effective, adult daily dose is 1 Gm. With DECLOMYCIN Demethylchlortetracycline, it is only 600 mg.



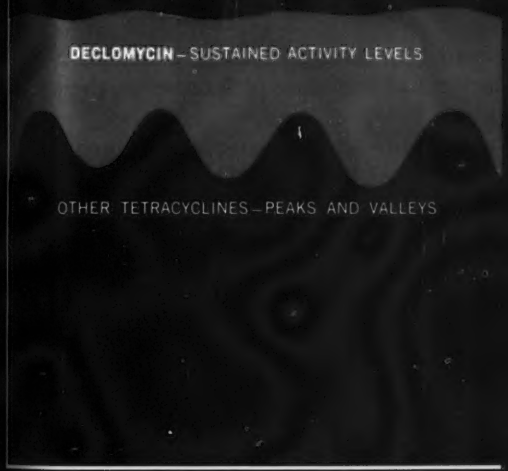
DECLO

evenly sustained

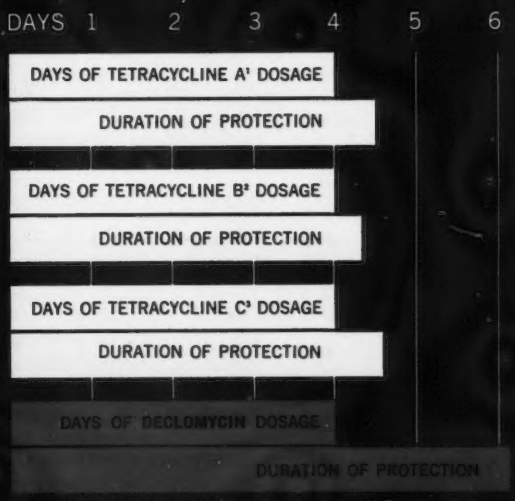
DECLOMYCIN Demethylchlortetracycline sustains, through the entire therapeutic course, the high activity levels needed to control the primary infective process and to check the onset of a complicating secondary infection at the original—or at another—site. This combined therapeutic action is sustained, in most instances, without the pronounced hour-to-hour, dose-to-dose, peak-and-valley fluctuations in activity levels which characterize other tetracyclines.

long retained

DECLOMYCIN Demethylchlortetracycline retains significant activity levels, up to 48 hours after the last dose is given. At least a full, extra day of positive antibacterial action may thus be confidently expected. One capsule four times a day, for the average adult in the average infection, is the same as with other tetracyclines—but the **total** dosage is lower and the duration of anti-infective action is longer.



PROTECTION AGAINST PROBLEM PATHOGENS



(1) Oxytetracycline. (2) Chlortetracycline. (3) Tetracycline.

PROTECTION AGAINST RECURRENCE

MYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

- higher activity/intake ratio—positive antibacterial action
- sustained activity levels—protection against problem pathogens
- up to two extra days' activity—protection against recurrence

CAPSULES, 150 mg., bottles of 16 and 100. **Dosage:** Average infections—1 capsule four times daily. Severe infections—Initial dose of 2 capsules, then 1 capsule every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into 4 doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day—divided into 4 doses.

PRECAUTIONS: As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under observation.

for the added measure of protection in clinical practice

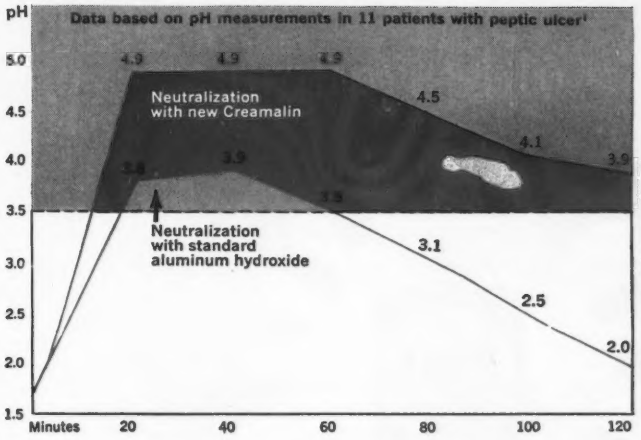
DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

At the site of peptic ulcer

Following determination of basal secretion, intragastric pH was continuously determined by means of frequent readings over a two-hour period.



neutralization is much faster and twice as long with

New CREAMALIN® ANTACID TABLETS

New proof in vivo[1] of the much greater efficacy of new Creamalin tablets over standard aluminum hydroxide has now been obtained. Results of comparative tests on patients with peptic ulcer, measured by an intragastric pH electrode, show that new Creamalin neutralizes acid from 40 to 65 per cent faster than the standard preparation. This neutralization (pH 3.5 or above) is maintained for approximately one hour longer.

New Creamalin provides virtually the same effects as a liquid antacid[2] with the convenience of a tablet.

Nonconstipating and pleasant-tasting, new Creamalin antacid tablets will not produce "acid rebound" or alkalosis.

Each new Creamalin antacid tablet contains 320 mg. of specially processed, highly reactive, short polymer dried aluminum hydroxide gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. Minute particles of the powder offer a vastly increased surface area for quicker and more complete acid neutralization.

Dosage: Gastric hyperacidity—from 2 to 4 tablets as necessary. Peptic ulcer or gastritis—from 2 to 4 tablets every two to four hours. Tablets may be chewed, swallowed whole with water or milk, or allowed to dissolve in the mouth. **How supplied:** Bottles of 50, 100, 200 and 1000.

1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: J. Am. Pharm. A. (Scient. Ed.) 48:384, July, 1959.

Winthrop LABORATORIES
New York 18, N. Y.

for peptic ulcer ■ gastritis ■ gastric hyperacidity

same old problem...

a new solution...

equally effective on *dry or oily scalps*

announcing Ioquin® SUSPENSION

A new preparation for the treatment of dandruff — afforded 95% control of symptoms in 714 cases studied.

From Abbott Laboratories—makers of SELSUN®*—comes an outstanding new treatment for common dandruff.*

WHAT IS IOQUIN?

Ioquin is a non-toxic suspension of 10% w/v diiodohydroxyquin (U.S.P.) in an aqueous base pleasantly scented with lavender.

HOW EFFECTIVE IS IOQUIN?

In clinical trials, Ioquin produced satisfactory control in more than 95% of 714 patients studied. The patients were about evenly divided between men and women.

HOW SAFE IS IOQUIN?

In the trials previously mentioned, no cases of sensitivity were reported. The investigators found Ioquin to be extremely well tolerated . . . even by patients treated regularly over a period of several months.

WHAT ARE THE INDICATIONS?

Ioquin is indicated for the treatment of mild or severe seborrheic dermatitis . . . *and is equally effective for dry or oily scalps.*

HOW DO YOU USE IOQUIN?

Treatment with Ioquin is a simple wash and rinse procedure. Most cases of simple dandruff can be brought under control in two to three weeks and kept under control with weekly applications (some cases are controlled with even less frequent applications).

HOW IS IOQUIN SUPPLIED?

Ioquin is supplied in 120 ml. green plastic squeeze bottles. List No. 6907.

IN SUMMARY . . .

Ioquin is an effective new preparation for the treatment of common dandruff. It has been shown to be safe and effective in clinical trials. It is a professional product in every sense of the word. It will be detailed to physicians and sold through pharmacies only. For complete details, see your Abbott man, or drop us a line . . . we'll be happy to send you the literature.

ABBOTT

IOQUIN—Diiodohydroxyquin, Abbott, SELSUN—Selenium Sulfide, Abbott

008-271

Safer Passenger "Packaging" Urged to Cut Auto Deaths

Physicians believe safer "packaging" of automobile passengers could reduce traffic deaths and injuries, an opinion survey made by the American Medical Association showed recently.

Members of the American Association for Automotive Medicine (AAAM), most of whom have competed in sports car races and promoted safer auto racing, were polled at a safety seminar in Dearborn, Mich.

The physician experts in automotive medicine rated the seat belt the most important single, economically feasible device now available to protect passengers.

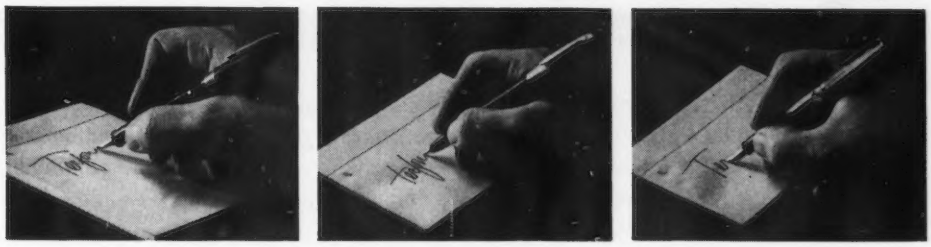
"Packaging a passenger in an automobile follows the same principles of packaging used to protect any valuable object being transported," according to Dr. H. A. Fenner, Hobbs, N.M., newly-elected American Association for Automotive Medicine president.

"The automobile, like any container being used to transport valuable contents, must be designed so as not to crush in on the contents, burst open, or spill out the contents."

In addition to seat belts, which many believed should be compulsory, the physicians recommended these "packaging" improvements:

(Continued on Page 32)

more and more physicians are prescribing this triple sulfa



TERFONYL

Squibb Triple Sulfas (Trisulfapyrimidines)

Clinical experience continues to prove that TERFONYL provides many special advantages fundamental to successful antibacterial therapy.

• specificity for a wide range of organisms • superinfection rarely encountered • soluble in urine through entire physiologic pH range • minimal disturbance of intestinal flora • excellent diffusion throughout tissues • readily crosses blood-brain barrier • sustained therapeutic blood levels • extremely low incidence of sensitization

SUPPLY: Tablets, 0.5 gm. • Suspension, raspberry flavored, 0.5 gm. per teaspoonful (5cc.).

SQUIBB *Squibb Quality—the Priceless Ingredient*

"TERFONYL"® IS A SQUIBB TRADEMARK

INCREASED LIFE EXPECTANCY FOR HYPERTENSIVES

"Life expectancy seems to be the one criterion that is most reliable and least questioned as a method of evaluating treatment for patients with elevated blood pressure."[1] "It is evident that effective therapy of hypertension will prolong the life of the patient by preventing the dreaded complications of this disease in the brain, the heart and the kidneys ." "There is no doubt of the prolongation of life in group 3 and 4 (Keith-Wagener-Barker) by adequate antihypertensive treatment. Some authorities report a 50 per cent, five year survival ratio for treated patients with malignant hypertension as against a 1 per cent survival ratio for untreated patients."[2]

Evaluation based on life expectancy is extremely difficult because of the peril of maintaining an untreated control group.[1] The doctor, however, can evaluate the symptoms related to the elevated blood pressure. . . . We know that retinopathy may improve, the heart may be reduced in size, the electrocardiogram may improve and in favorable cases the blood urea nitrogen level may fall.[2] These are reasonably objective criteria on which to base one's evaluation of treatment.[1]

On the succeeding page is evidence that Unitensen included in any therapeutic regimen may improve the results in hypertension as measured by a regression of objective clinical changes in a substantial proportion of the patients treated.

1. Currens, J. H.: New England J. Med. *261*:1062, 1959.
2. Waldman, S., and Pelner, L.: Am. Pract. & Digest. Treat. *10*:1139, 1959.
3. Cohen, B. M.: paper presented at A.M.A. Convention, June, 1958.
4. Cohen, B. M.: paper presented at Indiana Acad. G. P., March, 1959.
5. Cohen, B. M.: Am. J. Cardiology *1*:748, 1958.
6. Kirkendall, W. J.: J. Iowa M. Soc. *47*:300, 1957.
7. Cherny, W. B., *et al.*: Obst. & Gynec. *9*:515, 1957.
8. Raber, P. A.: Illinois M. J. *108*:171, 1955.
9. McCall, M. L., *et al.*: Obst. & Gynec. *6*:297, 1955.
10. Finnerty, F. A.: Am. J. Med. *17*:629, 1954.

Unlike diuretics or ganglionic blocking agents, Unitensen lowers blood pressure through widespread vasorelaxation. Normal vasomotor responses are not altered, and there is no venous pooling with resulting postural hypotension.[3-5] Through alleviation of cerebral vasospasm, Unitensen promotes cerebral blood flow and oxygen utilization.[6-9] Furthermore, Unitensen increases cardiac efficiency, improves renal function and tends to arrest the progress of vascular damage.[3, 4, 10]

Progress of Objective and Subjective Symptoms in Grades III and IV Hypertension Following Treatment with Unitensen and Unitensen-R

Observations in Patients* Treated up to 2 Years

The Course of Subjective Symptoms

Symptom	Number**	Improved	% Improved
Headache	27	21	77.7
Palpitation	20	13	65.0
Angina	15	9	60.0
Dyspnea	17	8	47.0

Objective Changes Following Treatment

Finding	Number**	Improved	% Improved
Funduscopic Changes	41	24	58.5
Enlarged Heart	20	13	65.0
Abnormal ECG	37	10	27.0
Proteinuria	31	12	38.7
Nitrogen Retention	17	6	35.2

Left hand charts from Clinical Exhibit "The Ambulatory Patient with Hypertension" presented AMA Convention, San Francisco, June 22-27, 1958, by B. M. Cohen, M.D.

Observations in Patients* Treated up to 3½ Years

The Course of Subjective Symptoms

Number**	Improved	% Improved
43	38	88.0
29	19	65.5
21	16	76.0
27	14	51.0

Objective Changes Following Treatment

Number**	Improved	% Improved
59	38	66.0
35	23	65.7
45	25	55.5
43	27	62.7
28	10	35.7

Right hand charts include patients previously reported who had been continuously maintained on Unitensen and Unitensen-R, plus additional patients later added to the study. From Clinical Exhibit "The Office Diagnosis and Treatment of the Patient with Hypertension" presented American Academy of General Practice, Indianapolis, March 18-19, 1959, by B. M. Cohen, M.D.

*All patients in this study were initially classified as Smithwick Grades III and IV.

**Expressed as the number of patients exhibiting the symptom recorded.

TO REDUCE INTESTINAL

GAS

BELCHING BLOATING FLATULENCE

A biochemical compound used to diminish intestinal gas in healthy persons and those patients having digestive disorders ■

KANULASE

Each Kanulase tablet contains Dorase,* 320 units, combined with pepsin, N.F., 150 mg.; glutamic acid HCl, 200 mg.; pancreatin, N.F., 500 mg.; oxbile extract, 100 mg. Dosage: 1 or 2 tablets at mealtime. Supplied: Bottles of 50 tablets.

*DORASE BRAND OF CELLULASE, EXPRESSED AS DIGESTIVE ACTIVITY UNITS.

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska

Safer Passenger "Packaging" Urged to Cut Auto Deaths

(Continued from Page 26)

—Padded instrument panels, roof supports, and steering column posts.

—Modified dash board so knees would not hit it directly in an accident.

—Safety door locks.

—High seat backs to prevent "head snapping."

—Deep dish steering wheels.

—Elimination of junk-accumulating ledge behind the back seat.

—Elimination of all dangerous pointed objects, projections, sharp corners, and other hazards in the car's interior.

In addition to these packaging improvements, better brakes and outside mirrors were recommended.

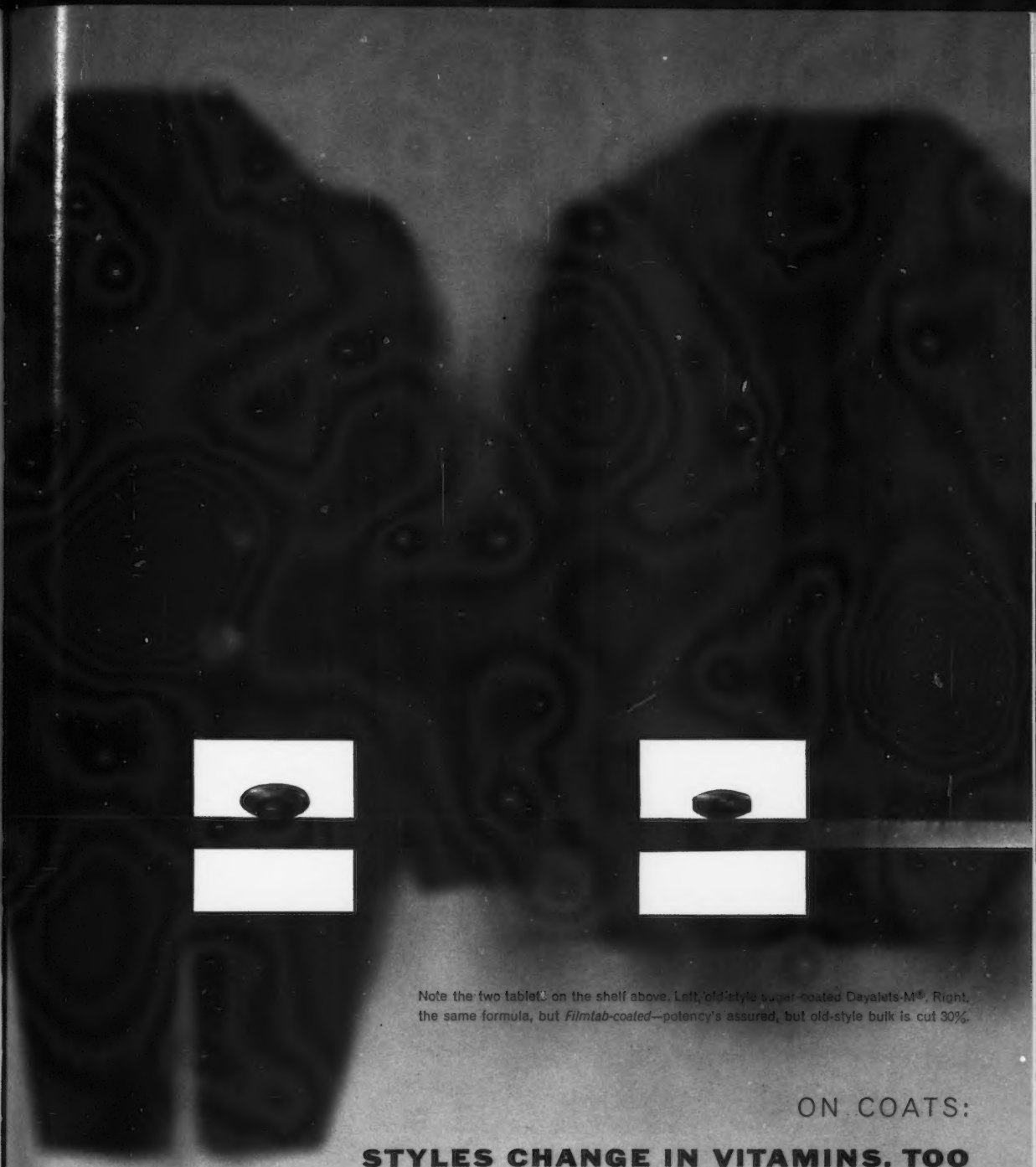
One M.D. suggested that safety features should be "built in," not sold as "extras."

The physicians also said they believed many highway accidents could be prevented by compulsory driving training courses in all high schools; improved licensing procedures, including periodic physical examinations of drivers by physicians; uniform highway marking systems, and more stringent enforcement of traffic regulations.

There was one suggestion that every effort be made to devise a test to predict driver behavior. This physician said, "Many persons driving on the highways today are neither physically nor mentally fit to drive."

The survey was made by *The American Medical Association News*, a newspaper published for physicians.

The A.M.A., the National Safety Council, and the U.S. Public Health Service currently are engaged in a study of ways to educate the public to the advantages of seat belts. A year-long pilot program was begun last February in Fort Wayne, Ind., with the cooperation of local groups, to determine techniques a community can use to encourage the use of seat belts.



Note the two tablets on the shelf above. Left, old-style sugar-coated Dayalets-M®. Right, the same formula, but *Filmtab-coated*—potency's assured, but old-style bulk is cut 30%.

ON COATS:

STYLES CHANGE IN VITAMINS, TOO

Coat styles change—whether it's a blazer or a B-complex vitamin. Not long ago, for instance, "Vitamins by Abbott" were dressed up with a new-style coating—*Filmtab*®.

The most obvious result was a marked reduction in tablet size—up to 30% in some products. The tablets themselves were brilliant in a variety of rainbow colors. They wouldn't chip or stick together in the bottle. All vitamin tastes and odors—gone.

Such were the aesthetic gains. Behind these, a significant pharmaceutical advance: with Filmtab, deterioration is slowed to an irreducible minimum, because the coating process is essentially a water-free procedure.

Finally—most important—Filmtab guarantees that the content of each tablet matches the formula printed on the label. While the person taking the vitamins may not worry much about rigid stability, Abbott does. *Assures* it, through Filmtab.

In short, Filmtab's a name that stands for quality, stability, potency. The very best in vitamin coatings. Filmtab doesn't add a penny to the cost. And it's a name found *only* on

VITAMINS by ABBOTT

009033A

NEWEST
NUTRITIONAL
PRODUCT
FROM ABBOTT

To meet special nutritional needs of growing teenagers...

Filmtab® DAYTEENS
TRADEMARK

- RICH IN IRON, CALCIUM, VITAMINS—IMPORTANT FACTORS FOR THE GROWTH YEARS
- FILMTAB-COATED TO CUT SIZE AND ASSURE FULL POTENCY
- HANDSOME TABLE BOTTLES AT NO EXTRA COST (100-SIZE)
- ALSO SUPPLIED IN BOTTLES OF 250 AND 1000.

NOW, DAYTEENS JOINS THE COMPLETE LINE OF QUALITY VITAMINS BY ABBOTT:

FILMTAB
DAYALETS®
Table bottles of 100
Bottles of 50 and 250

FILMTAB
DAYALETS-M®
Apothecary bottles of 100 and 250

Extra-potent maintenance formulas—ideal for the "nutritionally run-down"

FILMTAB
OPTILETS®

FILMTAB
OPTILETS-M®
Table bottles of 30 and 100
Bottles of 1000

Therapeutic formulas for more severe deficiencies—illness, infection, etc.

FILMTAB
SUR-BEX® with C
Table bottle of 60
Bottles of 100, 500 and 1000

Therapeutic formula of the essential B-complex plus C, for convalescence, stress, post-surgery, etc.

EACH DAYTEENS FILMTAB® REPRESENTS:

Vitamin A	(5000 units) 1.5 mg.
Vitamin D	(1000 units) 25 mcg.
Thiamine Mononitrate (B_1)	2 mg.
Riboflavin (B_2)	2 mg.
Nicotinamide	20 mg.
Pyridoxine Hydrochloride	0.5 mg.
Vitamin B_{12} (as cobalamin concentrate)	2 mcg.
Calcium Pantothenate	5 mg.
Ascorbic Acid (C)	50 mg.
Iron (as sulfate)	10 mg.
Copper (as sulfate)	0.15 mg.
Iodine (as calcium iodate)	0.1 mg.
Manganese (as sulfate)	0.05 mg.
Magnesium (as oxide)	0.15 mg.
Calcium (as phosphate)	250 mg.
Phosphorus (as calcium phosphate)	193 mg.

VITAMINS by ABBOTT

ABBOTT

MODEL 100M MOBILE VISO-CARDIETTE

$895 delivered,
Continental U.S.A.

THIS IS THE NEWEST Sanborn electrocardiograph — complete with all accessories in a fully mobile, easy-to-roll cabinet version. A single Model 100M "Mobile Viso" can easily serve several locations within a clinic or hospital, and perfectly answers the need for instrument storage away from the point of use. The highly developed design of this modern instrument also provides fully diagnostic cardiograms at either of two chart speeds (25 and 50 mm/sec), sensitivity settings of ½, 1 or 2 times normal, fully automatic stylus stabilization during lead switching, pushbutton grounding, jacks for recording and monitoring non-ECG inputs in conjunction with other equipment. The cabinet is available in either handsome mahogany or exceptionally durable, stain-resistant plastic laminate.

The same basic instrument — with identical circuitry — is also manufactured as a *desk-top instrument*, designated *Model 100 Viso-Cardiette*. A third choice in Sanborn ECG'S is also offered, for the physician whose practice demands *maximum portability:* the 18-pound "briefcase" size *Model 300 Visette*. All are proven Sanborn electrocardiographs, reflecting more than four decades of experience in the manufacture of medical instrumentation.

MEDICAL DIVISION

SANBORN COMPANY

175 WYMAN ST., WALTHAM 54, MASS.

GLENDALE *Branch Office* 203 So. Verdugo Rd., Chapman 5-6761 and 5-6762
SAN FRANCISCO *Branch Office* 2310 Irving St., Lombard 4-1900
SAN DIEGO *Resident Representative* 2800 University Ave., Cypress 6-4735

Photos used with patient's permission.

How new Dianabol rebuilt muscle tissue in this underweight, debilitated patient

Patient was weak and emaciated before Dianabol. R. C., age 51, weighed 160 pounds following surgery to close a perforated duodenal ulcer. His convalescence was slow and stormy, complicated by pneumonia of both lower lobes. Weak and washed out, he was considered a poor risk for further necessary surgery (cholecystectomy). Because a conventional low-fat diet and multiple-vitamin therapy failed to build up R. C. sufficiently, his physician prescribed Dianabol 5 mg. b.i.d.

Patient regains strength on Dianabol. In just two weeks R. C.'s appetite increased substantially; he had gained 9½ pounds of lean weight. His muscle tone was improved, he felt much stronger. After 4 weeks, he weighed 176 pounds. Biceps measurement increased from 10" to 11½". For the first time since onset of postoperative pneumonia, his chest was clear. Mr. C.'s physician reports: "He tolerated cholecystectomy very well and one week postop felt better than he has in the past 2 years."

Eye's Sensitivity to Glare Increases After 40

The effect of glare on vision increases sharply after the age of 40, according to an article in the October *Archives of Ophthalmology*, published by the American Medical Association.

Ernst Wolf, Ph.D., Boston, reported on a study of glare and age in more than 200 persons ranging from 5 to 85 years old.

The visibility of objects is reduced in the presence of glare, particularly in the vicinity of a blinding glare source, he said. To overcome the loss in visibility the contrast between figure and ground must be enhanced, or the size of the object seen must be increased, he said.

In his study, the illumination of the object was increased.

"This increase necessary for the recognition of the targets becomes progressively greater as age increases," Dr. Wolf reported.

"Comparing individuals in the age range between 5 and 15 years with those in the range between 75 and 85 years, a 50 to 70 fold increase in target screen luminance is necessary for the latter group as compared with the former.

"At the age of 40 years a sudden acceleration in sensitivity to glare occurs."

Since glare varies with age, he said, it is apparent that the phenomenon occurs within the eye. Studies suggest that the increased opacity of the lens which develops with advancing age and the resulting scatter of light within the eye "is primarily responsible for the phenomenon of glare," he said.

New Approach Described to Physical Rehabilitation

A new approach to the physical rehabilitation of brain-injured children which does away with braces and crutches has brought "encouraging results," according to a Philadelphia medical group.

A two-year study of 76 children from 1 to 9 years old with severe brain injuries is reported in the Sept. 17 *Journal of the American Medical Association.*

A program was worked out for each child and taught to the parents who carried out the program at home. The patients were seen every two months at the Rehabilitation Center at Philadelphia.

Emphasis was placed on permitting the child to stay on the floor—the normal child's "athletic field"—where he would have an opportunity to achieve the functions related to the undamaged part of the brain.

All nonwalking children were required to spend all day on the floor and encouraged to crawl or creep. They were removed from the floor only for meals, to be loved or to be treated.

When a child reached the stage when his injury prevented him from advancing, exercise were begun

(Continued on Page 82)

In over five years

...for the tense and nervous patient

Despite the introduction in recent years of "new and different" tranquilizers, Miltown continues, quietly and steadfastly, to gain in acceptance. Meprobamate (Miltown) is prescribed by the medical profession more than any other tranquilizer in the world.

The reasons are not hard to find. Miltown is a ***known*** drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.***

s of clinical use...

Proven

in more than 750 published clinical studies

Effective

for relief of anxiety and tension

Outstandingly Safe

1. simple dosage schedule produces rapid, reliable tranquilization without unpredictable excitation
2. no cumulative effects, thus no need for difficult dosage readjustments
3. does not produce ataxia, change in appetite or libido
4. does not produce depression, Parkinson-like symptoms, jaundice or agranulocytosis
5. does not impair mental efficiency or normal behavior

Miltown®

meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; or as MEPROTABS*—400 mg. *unmarked*, coated tablets.

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CM-2533

Extra Chromosome Found in Mental Retardation Case

Forty-seven chromosomes, one more than normal, have been found in a mentally-retarded 21-year-old woman with minor congenital abnormalities, researchers at the Roswell Park Memorial Institute, Buffalo, N. Y., reported in the Sept. 17 *Journal of the American Medical Association*. This was the first description of the finding of an extra chromosome among the six largest chromosomes.

The authors are Avery A. Sandberg, M.D.; Lois H. Crosswhite, B.A., and Edwin Gordy, M.D.

Each normal human being has 46 chromosomes, 22 pairs of autosomes and two sex chromosomes (XX in the female, XY in the male). Half of the chromosomes come from the mother and half from the father at the time of conception. Chromosomes, located in the nucleus of the cell, contain genes which determine hereditary traits.

There have been previous reports of an extra chromosome among the smallest chromosomes in persons with mongolism, a specific type of mental retardation, and of an extra chromosome of medium size in children with congenital defects.

"From the reports that have appeared so far and from the present findings it follows that trisomy [an extra autosome] is associated with various congenital defects, the exact syndrome depending on the chromosomes involved and the resulting impact on over-all genic balance [the distribution of genes]," the researchers said.

"Other chromosomal abnormalities, which may be the cause of, or related to, the many variations seen in mongolism, will probably come to light.

"The extension of chromosomal studies in patients with mental retardation and other congenital anomalies should be of considerable aid in establishing genetic distinction within groups of superficially similar syndromes."

The authors said it had been surmised, on the basis of gene content, that the larger the extra chromosome, the more lethal and complicated the associated abnormalities would be.

However, they said, "the finding in our case would seem to indicate that there may not be any significant correlation between the size of the chromosome involved in trisomy and the extent and number of congenital abnormalities."

In the case reported, the woman's main physical defects were webbing of the skin around the neck and flatness of the back of the head. Her I.Q. was about 40 and she possessed a good memory for certain events and for numbers.

The authors said most authorities seem to favor the view that trisomy is caused by the failure of certain chromosomes to separate during the devel-

(Continued on Page 44)

After a history and a physical ruled out organic disease, the physician diagnosed the case as recurring states of anxiety. To relieve these symptoms for this busy, on-the-go housewife, he prescribes Meprospan-400, the *only* meprobamate in *sustained-release* form.

As directed, the patient takes one Meprospan-400 capsule at breakfast. Her symptoms of tension and nervousness are soon relieved, and she will not have to remember to take another capsule until dinnertime.

Calm and relaxed, the patient is no longer upset by the pressures and irritations met in everyday life, nor is she likely to be incapacitated by autonomic disturbances, drowsiness, ataxia or other untoward reactions.

Alert and attentive, the patient participates in a P.T.A. meeting, following her second capsule of Meprospan-400 taken with the evening meal. Meprospan-400 does not decrease her mental efficiency or interfere with her normal activities or behavior.

Peacefully asleep, the patient enjoys beneficial rest . . . Meprospan-400 has relieved the tensions that previously prevented sleep or kept her tossing and turning throughout the night.

most widely prescribed tranquilizer . . .
most convenient dosage form . . .

ONE CAPSULE LASTS 12 HOURS

Meprospan®-400

400 mg. MILTOWN® SUSTAINED-RELEASE CAPSULES

Usual dosage: One capsule at breakfast lasts all day, one capsule with evening meal lasts all night. **Supplied:** Meprospan-400, each blue-topped *sustained-release* capsule contains 400 mg. Miltown. **Also available:** Meprospan-200, each yellow-topped *sustained-release* capsule contains 200 mg. Miltown. **For children:** Capsules can be opened and the coated granules mixed with soft foods or liquids.

Both potencies in bottles of 30.

Samples and literature available on request.

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There's hardly a case of "nervous gut" that won't respond to BENTYL

(dicyclomine) hydrochloride

85%

effective[1-7]

(from infancy to old age)

The effectiveness of antispasmodic BENTYL has been confirmed by a decade of consistently good results.[1-25] Prolonged relief from G.I. spasm and pain is usually attained in 30 minutes or less.

REFERENCES: 1. Lorber, S. H., and Shay, H.: Gastroenterology *28*:274, 1955. 2. Hock, C. W.: J. M. A. Georgia *40*:22, 1951. 3. Chamberlin, D. T.: Gastroenterology *17*:224, 1955. 4. Steves, M. F.: Ohio State M. J. *48*:615, 1952. 5. Derome, L.: Canad. M. A. J. *69*:532, 1953. 6. Pakula, S. F.: Postgrad. Med. *11*:123, 1952. 7. Guerrero, R. M., Cancio, R., and Songco, R.: Phil. J. Pediat. *2*:30, 1953. 8. Hock, C. W.: J. M. A. Georgia *43*:124, 1954. 9. Hufford, A. R.: Am. J. Digest. Dis. *19*:257, 1952. 10. Brown, D. W., and Guilbert, G. D.: Am. J. Ophth. *36*:1735, 1953. 11. Cholst, M., Goodstein, S., Berens, C., and Cinotti, A.: J.A.M.A. *166*:1276, 1958. 12. Brown, B. B., Thompson, C. R., Klahm, G. R., and Werner, H. W.: J. Am. Pharm. A. (Sc. Edit.) *39*:305, 1950. 13. Hufford, A. R.: J. Michigan M. Soc. *49*:1308, 1950. 14. McHardy, G. G., Browne, D. C., Marek, F. H., McHardy, R., and Ward, S.: J.A.M.A. *147*:1620, 1951. 15. Esses, E., Magee, D. F., and Ivy, A. C.: Gastroenterology *21*:574, 1952. 16. Northrup, D. W., Stickney, J. C., and Van Liere, E. J.: Am. J. Physiol. *171*:513, 1952.

There's hardly ever a case who can't tolerate BENTYL

(dicyclomine) hydrochloride

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well tolerated[1-8]

(even in glaucoma patients)

The use of BENTYL in glaucoma patients is an unusual index of its safety.[9-11] Because of highly selective action on the G.I. tract, blurred vision, dry mouth or urinary retention rarely occur.

Usual dosage: 20 mg. t.i.d. You may prescribe BENTYL in any of 7 convenient dosage forms. There is a BENTYL dosage form to suit every age group and therapeutic need. See Page 743, Physicians' Desk Reference, 1960.

17. Lorber, S. H., and Shay, H.: Fed. Proc. *12*:90, 1953. 18. Johnston, R. I.: J. Indiana M. A. *46*:869, 1953. 19. Marien, B., Webster, D. R., and Tidmarsh, C. J.: Gastroenterology *24*:200, 1953. 20. Hardin, J. H., Levy, J. S., and Seager, L.: South. M. J. *47*:1190, 1954. 21. Sleisenger, M. H., Eisenbud, M., and Almy, T. P.: Gastroenterology *27*:829, 1954. 22. Weiss, S.: Am. J. Gastroenterology *23*:69 (Editorial) 1955. 23. Illingworth, R. S.: Lancet *2*:1119, 1959. 24. McHardy, G. G., and Browne, D. C.: South. M. J. *45*:1139, 1952. 25. Miller, B. N.: J. South Carolina, M. A. *48*:1, 1952.

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for bedridden as well as ambulant patients

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milk-like action...

no constipation or laxation...

no interference with gastrointestinal absorption...

WHENEVER an ANTACID is indicated:

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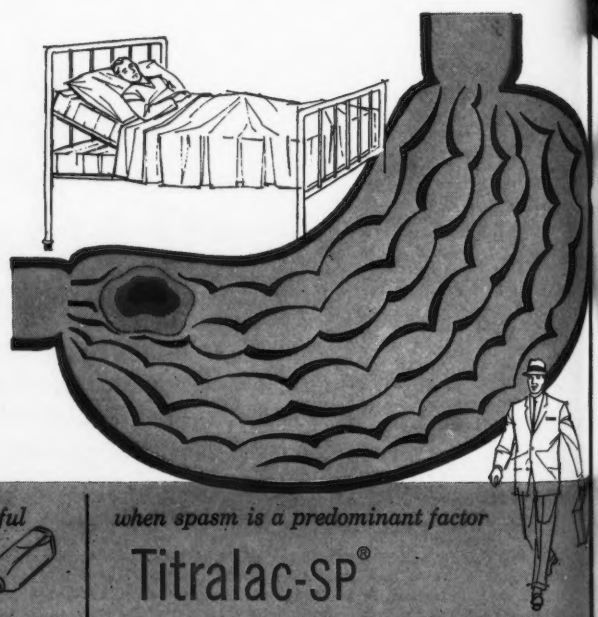

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Prompt prolonged action anywhere, anytime. Smooth, deliciously flavored tablets may be chewed, dissolved in mouth, or swallowed with water.

Availability: White, mint-flavored tablets, each containing glycine 0.18 Gm. and calcium carbonate 0.42 Gm. In bottles of 100.

for relief in a teaspoonful

Titralac® LIQUID

Just one teaspoonful—not ounces or tablespoonfuls. Fresh minty flavor appeals to the most finicky palate.

Availability: White, mint-flavored liquid, each teaspoonful (5 cc.) containing glycine 0.30 Gm. and calcium carbonate 0.70 Gm. In bottles of 8 fl. oz.

when spasm is a predominant factor

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Titralac plus homatropine methylbromide, for acute phases or when spasm contributes to symptom picture. Same delicious taste as Titralac tablets and liquid.

Availability: Pink, mint-flavored tablets, each containing Titralac formula plus 0.5 mg. homatropine methylbromide, bottles of 100.

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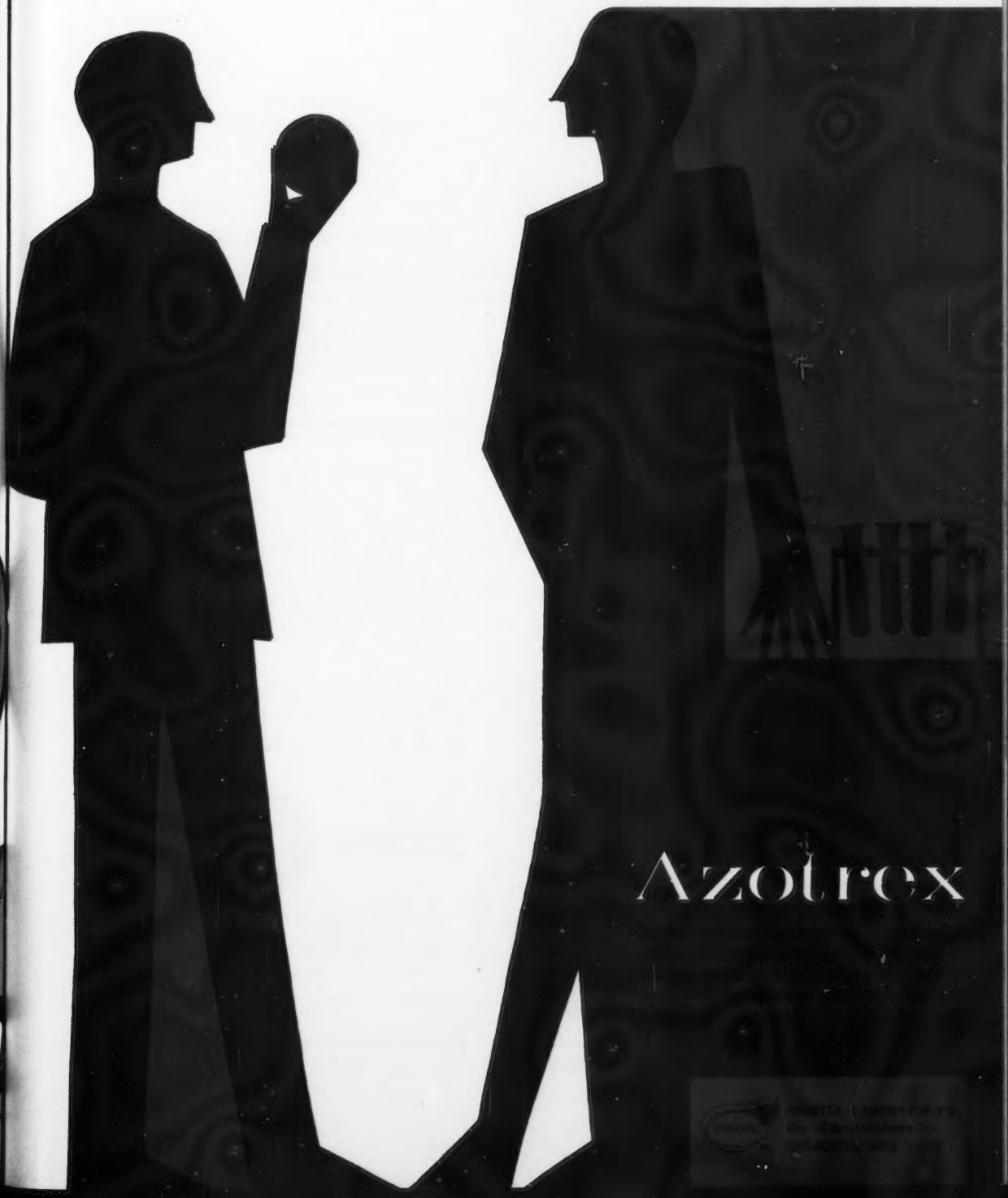
Northridge, Calif.

"Well, I'll send the culture to the lab, and we should hear from Bacteriology in a day or two. Now, how shall we treat her cystitis while we're waiting?"

"The chief usually orders AZOTREX. *The azo dye is an excellent urinary analgesic and the sulfamethizole and tetracycline are likely to take care of most of the bugs you find in the urinary tract. If necessary, you can switch to something else after you get the lab findings. But it probably won't be necessary."*



Extra Chromosome Found in Mental Retardation Case

(Continued from Page 38)

opment of the sex cells in either parent.

They added that trisomy in itself may not always result in obvious congenital defects.

The *Journal*, commenting editorially on the report, said:

"The relatively simple technique for the determination of the chromosomal constitution in human subjects . . . should be a stimulus to other physicians to undertake similar studies in a variety of hereditary and other types of morbid states. Such studies should include the determination of the chromosomal pattern of parents and siblings.

"An accumulation of such data on a large scale, it is hoped, would ultimately aid the geneticist in the identification of the hereditary nature of such conditions."

Improvement Reported in Stipends For Interns, Residents

Stipends paid interns and residents showed improvement in many of the nation's hospitals during the year ended June 30, 1960, a report by the American Medical Association has said.

The report, prepared by the A.M.A. Council on Medical Education and Hospitals, is contained in the Oct. 8 *Journal of the American Medical Association.*

The average cash stipend per intern in hospitals affiliated with medical schools was $166 per month, a seven per cent increase over the previous year. In hospitals not affiliated with medical schools, the average stipend was $207, an increase of four and one-half per cent over the previous year.

In addition to the cash stipend, the report said 74 per cent of the hospitals paid full maintenance

(Continued on Page 50)

anticholinergic

KEEPS THE STOMACH FREE OF PAIN

tranquilizer

KEEPS THE MIND OFF THE STOMACH

Milpath acts quickly to suppress pain and spasm, and to allay anxiety and tension with minimal side effects.

AVAILABLE IN TWO POTENCIES:

Milpath-400 — Yellow, scored tablets of 400 mg. Miltown (meprobamate) and 25 mg. tridihexethyl chloride. Bottle of 50.

Dosage: 1 tablet t.i.d. at mealtime and 2 at bedtime.

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Dosage: 1 or 2 tablets t.i.d. at mealtime and 2 at bedtime.

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®Miltown + *anticholinergic*

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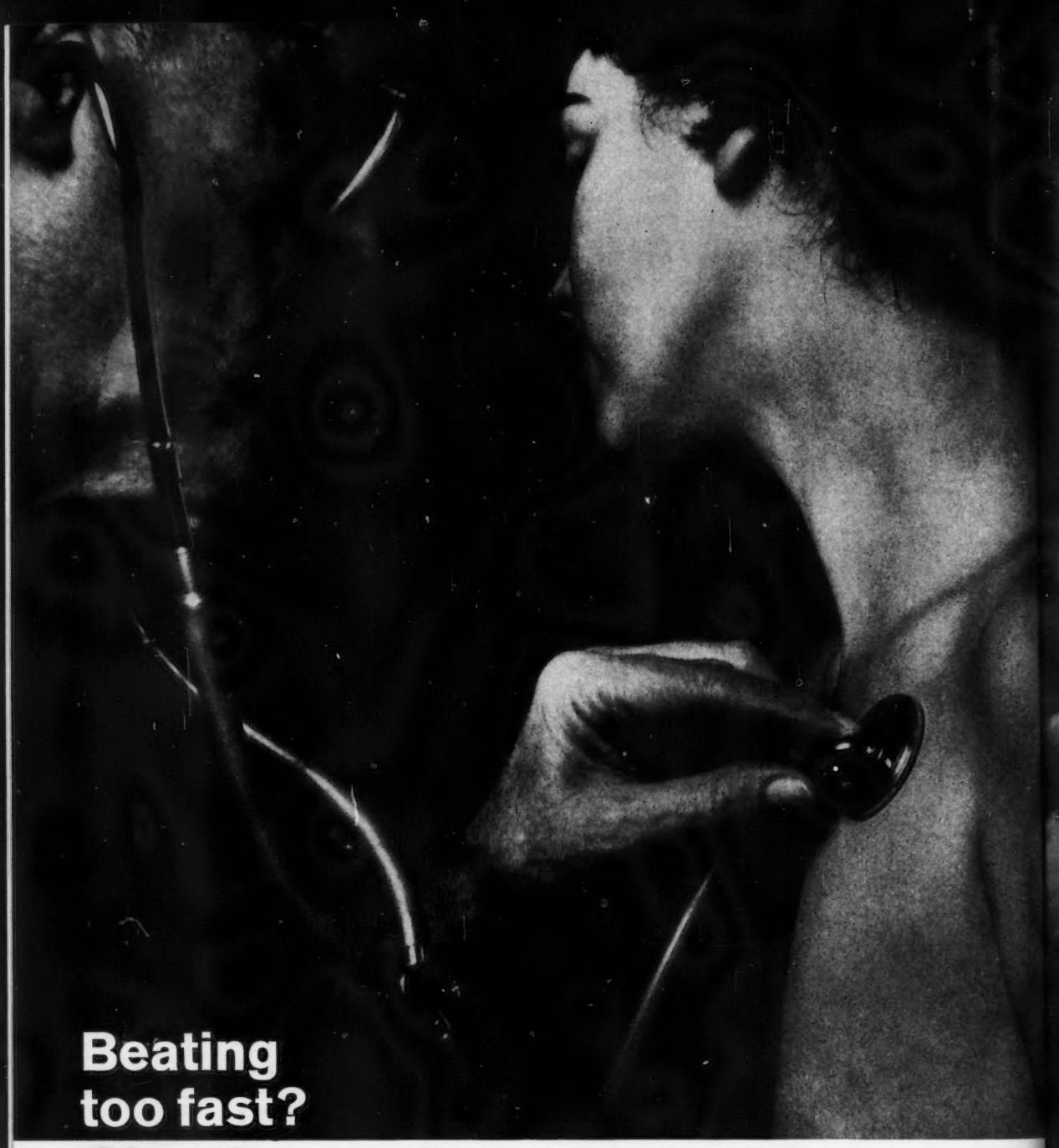

Beating too fast?

Slow it down with SERPASIL®

(reserpine CIBA)

Serpasil has proved effective as a heart-slowing agent in the following conditions: mitral disease; myocardial infarction; cardiac arrhythmias; neurocirculatory asthenia; thyroid toxicosis; excitement and effort syndromes; cardiac neurosis; congestive failure. Serpasil should be used with caution in patients receiving digitalis and quinidine. It is not indicated in cases of aortic insufficiency.

SUPPLIED: Tablets, 0.1 mg., 0.25 mg. (scored) and 1 mg. (scored). Complete information available on request.

CIBA

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a breathing spell from asthma

Quadrinal*

a rapid way to clear the airway

- **stops wheezing**
- **increases cough effectiveness**
- **relieves spasm**

In chronic disorders associated with obstructed respiration, the dependable antispasmodic and expectorant action of Quadrinal rapidly clears the bronchial tree. Patients breathe more easily and acute episodes of bronchospasm are often eliminated. Quadrinal is well tolerated, even on prolonged administration. The potassium iodide in Quadrinal provides an expectorant of time-tested effectiveness and safety.

Indications: Bronchial asthma, chronic bronchitis, pulmonary fibrosis, pulmonary emphysema.

Quadrinal Tablets, containing ephedrine HCl (24 mg.), phenobarbital (24 mg.), "Phyllicin"* (theophylline-calcium salicylate) (130 mg.), and potassium iodide (0.3 Gm.).

Also available—
a new Quadrinal dosage form with taste-appeal for all age groups:
fruit-flavored QUADRINAL SUSPENSION (1 teaspoonful = 1/2 Quadrinal Tablet)

KNOLL PHARMACEUTICAL COMPANY, ORANGE, NEW JERSEY

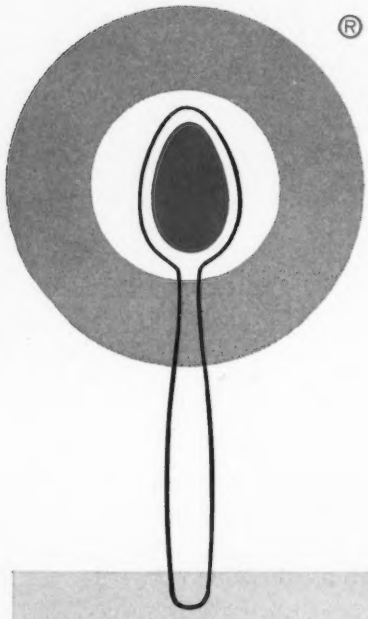
*Quadrinal, Phyllicin

a new antitussive molecule

alpha-(2-dimethylaminoethyl)-o-chlorobenzhydrol hydrochloride, generically termed "chlophedianol hydrochloride"

NON-NARCOTIC

ULO®



SYRUP

THE ADVANTAGES OF ULO

cough suppressant action	equal to	narcotics
duration of action	greater than	narcotics
side actions	less than	narcotics

Though it reaches peak action somewhat more slowly, the cough-suppressant power of ULO is fully as great as that of narcotics.

After reaching peak action, ULO maintains its maximal cough-suppressant effect undiminished for 4 to 8 hours.

ULO is free from the limitations and undesirable side effects of narcotics...no constipation...no nausea...no gastric irritation...no appetite suppression...no tolerance development...no respiratory depression...no drowsiness.

Percent Inhibition of Cough

CLINICAL RESULTS WITH ULO

in 1078 patients observed by 50 U.S. investigators, 46 of whom were chest physicians.

Diagnostic Category	Number of Patients	Results: Good to Excellent	Fair	Poor	Not Specified
Upper Respiratory Infection	521	357	88	57	19
Bronchitis	398	309	42	38	9
Pneumonia	53	44	4	5	0
Postnasal Drip	48	32	9	3	4
Tracheobronchitis	32	23	4	3	2
Croup	14	10	2	2	0
Pleurisy	12	11	0	1	0
Total Patients	**1078**	**786**	**149**	**109**	**34**
Total Patients Benefited		**86.2%**			

Indications

Upper respiratory infections

Common cold

Influenza

Pneumonia

Bronchitis

Tracheitis

Laryngitis

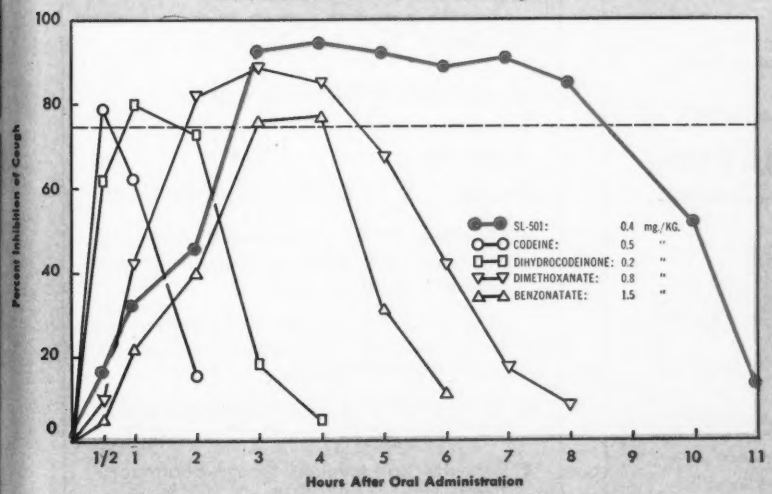
Croup

Pertussis

Pleurisy

4 to 8 hour sustained cough suppression

Comparison of therapeutically equivalent doses of **ULO** and other antitussive agents



Mean per cent inhibition of cough in dogs following oral administration of therapeutically equivalent doses of ULO (SL-501) and other antitussive agents. The horizontal dotted line represents threshold of maximum effectiveness, arbitrarily taken at 75 per cent suppression of counted coughs. Note that the duration of maximum effectiveness of a single dose of ULO is 6 hours, 24 times as long as that of codeine. Peak effectiveness of ULO is not reached until 2 or 3 hours after administration, but the maximum antitussive action lasts at least 6 hours.

Chen, J. Y.; Biller, H. F., and Montgomery, E. G., Jr.: J. Pharmacol. & Exper. Therap. *128*:384, 1960.

Safety

There are no known contraindications. Side effects occur only occasionally and have been mild. Nausea and dizziness have occurred infrequently, vomiting and drowsiness rarely.

Dosage:

Adults: 25 mg. (1 teaspoonful) 3 or 4 times daily as required;

Children: 6 to 12 years of age—12.5 to 25 mg. (½ to 1 teaspoonful) 3 or 4 times daily as required;

2 to 6 years of age—12.5 mg. (½ teaspoonful) 3 or 4 times daily as required.

Availability

ULO Syrup, 25 mg. per 5 cc. (teaspoonful), in bottles of 12 fluid ounces.

Riker

Northridge, California

Improvement Reported in Stipends For Interns, Residents

(Continued from Page 44)

for unmarried interns, 18 per cent paid partial maintenance while 8 per cent paid none. For the married intern, full maintenance was provided by 52 per cent of the hospitals and partial maintenance by 35 per cent while 13 per cent paid none.

Beginning stipends for residencies also showed improvement.

In affiliated hospitals, the report said 39 per cent of the residencies paid from $101 to $300 per month. In the nonaffiliated group, 41 per cent of the residencies paid from $101 to $350 per month.

A total of 16 residencies paid more than $600 per month, including eight over $700 and two over $950. There were only six residencies over $700 and none over $950, according to the 1958-59 report.

For the 1959-60 academic year, there were 9,457 foreign physicians from 92 countries training in hospitals throughout the United States, the report said. This is a 13 per cent increase over the number reported in the previous year.

The A.M.A. and the Institute of International Education cooperated in taking one census of all interns and residents, including American and foreign graduates.

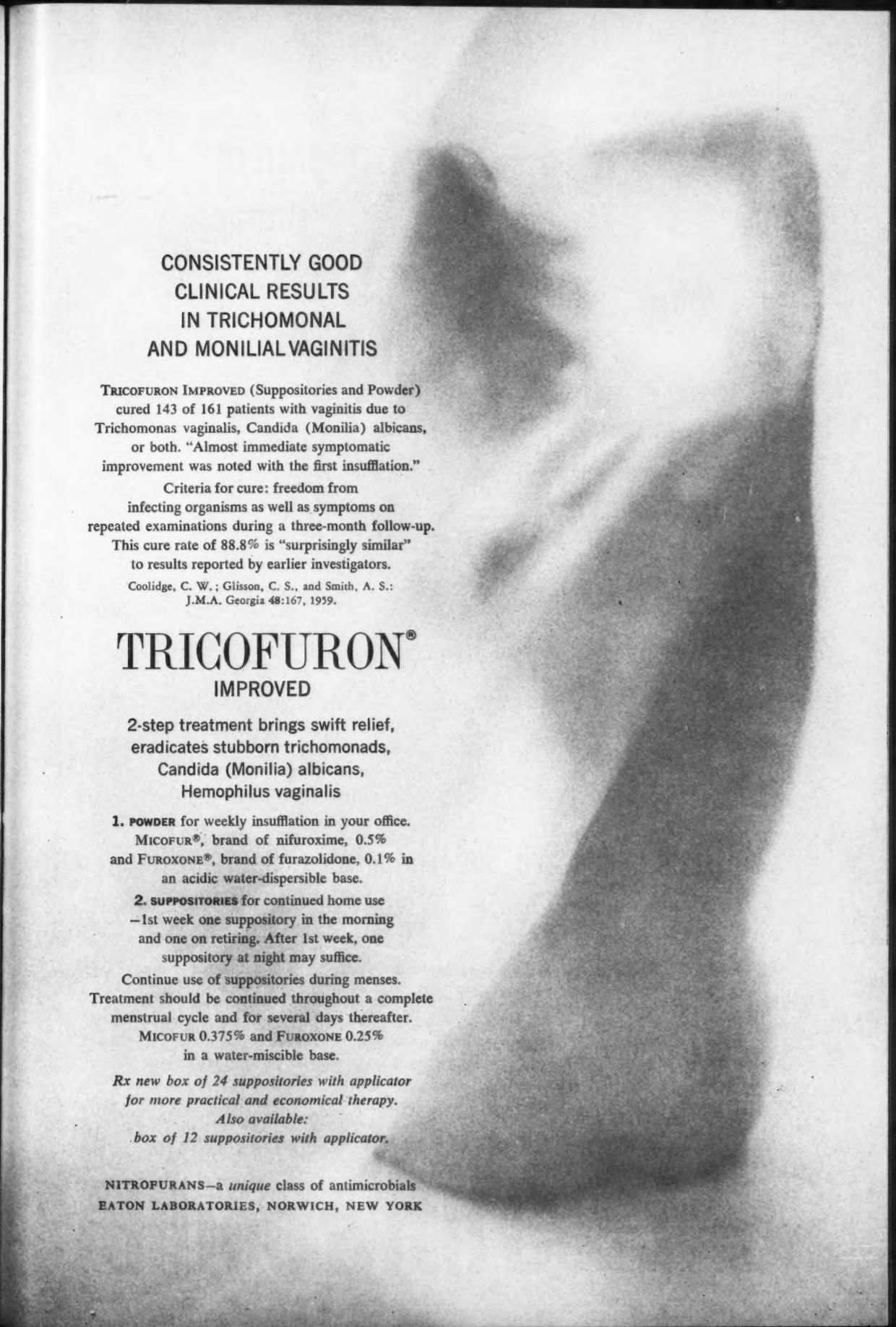
Six states accepted more than 500 foreign graduates. These were New York with 2,387 or 25 per cent, Ohio with 872 or 9 per cent, Pennsylvania with 619 or 7 per cent, Massachusetts with 573 or 6 per cent, Illinois with 552 or 6 per cent, and New Jersey with 502 or 5 per cent.

The number of foreign interns and residents is expected to decline during the 1960-61 academic year as a result of the policy requiring them to be certified by the Educational Council for Foreign Medical Graduates (ECFMG) after Dec. 31, 1960, the report pointed out.

"It has been estimated that possibly as many as 15 per cent of foreign physicians who were in this country during 1959 to 1960 may be required to return to their homelands as a result of failing to secure ECFMG certification," the report said adding:

"It is the general feeling of informed authorities that the decrease in the total number of foreign graduates available for internships and residencies will be temporary."

The report also revealed that pilot programs have been established at three hospitals for training graduates in "family practice." These new two-year programs are being offered at Indiana University Medical Center, Indianapolis, University of Kansas Medical Center, Kansas City, and Baltimore City Hospital, Baltimore.



CONSISTENTLY GOOD CLINICAL RESULTS IN TRICHOMONAL AND MONILIAL VAGINITIS

TRICOFURON IMPROVED (Suppositories and Powder) cured 143 of 161 patients with vaginitis due to Trichomonas vaginalis, Candida (Monilia) albicans, or both. "Almost immediate symptomatic improvement was noted with the first insufflation."

Criteria for cure: freedom from infecting organisms as well as symptoms on repeated examinations during a three-month follow-up. This cure rate of 88.8% is "surprisingly similar" to results reported by earlier investigators.

Coolidge, C. W.; Glisson, C. S., and Smith, A. S.: J.M.A. Georgia 48:167, 1959.

TRICOFURON®

IMPROVED

2-step treatment brings swift relief, eradicates stubborn trichomonads, Candida (Monilia) albicans, Hemophilus vaginalis

1. **POWDER** for weekly insufflation in your office. MICOFUR®, brand of nifuroxime, 0.5% and FUROXONE®, brand of furazolidone, 0.1% in an acidic water-dispersible base.

2. **SUPPOSITORIES** for continued home use —1st week one suppository in the morning and one on retiring. After 1st week, one suppository at night may suffice.

Continue use of suppositories during menses. Treatment should be continued throughout a complete menstrual cycle and for several days thereafter. MICOFUR 0.375% and FUROXONE 0.25% in a water-miscible base.

Rx new box of 24 suppositories with applicator for more practical and economical therapy.
Also available:
box of 12 suppositories with applicator.

NITROFURANS—a *unique* class of antimicrobials
EATON LABORATORIES, NORWICH, NEW YORK

saturation doses – the hard way!

Each of these food portions contains a saturation dose of one of the water-soluble B vitamins or C. The easy way to provide such quantities of these vitamins with speed, safety and economy is to prescribe Allbee with C. Recommended in pregnancy, deficiency states, digestive dysfunction and convalescence.

In each Allbee with C:		As much as:*
Thiamine mononitrate (B_1)	15 mg.	6.9 lbs. of fried bacon
Riboflavin (B_2)	10 mg.	31½ ozs. of liverwurst
Pyridoxine HCl (B_6)	5 mg.	2 lbs. of yellow corn
Nicotinamide	50 mg.	11 ozs. of roasted peanuts
Calcium pantothenate	10 mg.	¼ lb. of fried beef liver
Ascorbic acid (Vitamin C)	**250 mg.**	¾ lb. of cooked broccoli

*These common foods are among the richest sources of B vitamins and ascorbic acid. H. A. Wooster, Jr., Nutritional Data, 2nd Ed., Pittsburgh, 1954.

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NEW... for high levels of control in petit mal epilepsy

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Latest member of the Parke-Davis Family of Anticonvulsants

In an extensive clinical study* involving 109 children with petit mal, the investigators found ZARONTIN to be: **EFFECTIVE**—"Quite a few patients, never before helped by any drug, have been completely controlled for several years on [ZARONTIN]." **SPECIFIC**—"Petit mal cases responded remarkably well to [ZARONTIN]...." "Quick and dramatic reduction of attacks occurred in most of 109 patients studied...." **WELL TOLERATED**—These investigators found in this series of patients that "...side effects were mild and infrequent." **DEPENDABLE**—"Results to date unquestionably favor the action of [ZARONTIN] as far as ability to hold former gains is concerned." PACKAGING: ZARONTIN (ethosuximide, Parke-Davis) Capsules, 0.25 Gm., bottles of 100.

other members of THE PARKE-DAVIS FAMILY OF ANTICONVULSANTS —for grand mal and psychomotor seizures: DILANTIN® Sodium (diphenylhydantoin sodium, Parke-Davis) is supplied in several forms including Kapseals,® 0.03 Gm. and 0.1 Gm., bottles of 100 and 1,000 • PHELANTIN® (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.) Kapseals, bottles of 100 • **for the petit mal triad:** MILONTIN® (phensuximide, Parke-Davis) Kapseals, 0.5 Gm., bottles of 100 and 1,000; Suspension, 250 mg. per 4 cc., 16-ounce bottles • CELONTIN® (methsuximide, Parke-Davis) Kapseals, 0.3 Gm., bottles of 100.

See medical brochure, available to physicians, for details of administration and dosage.

*Zimmerman, F. T., & Burgemeister, B. B.: **Neurology 8**:769, 1958.

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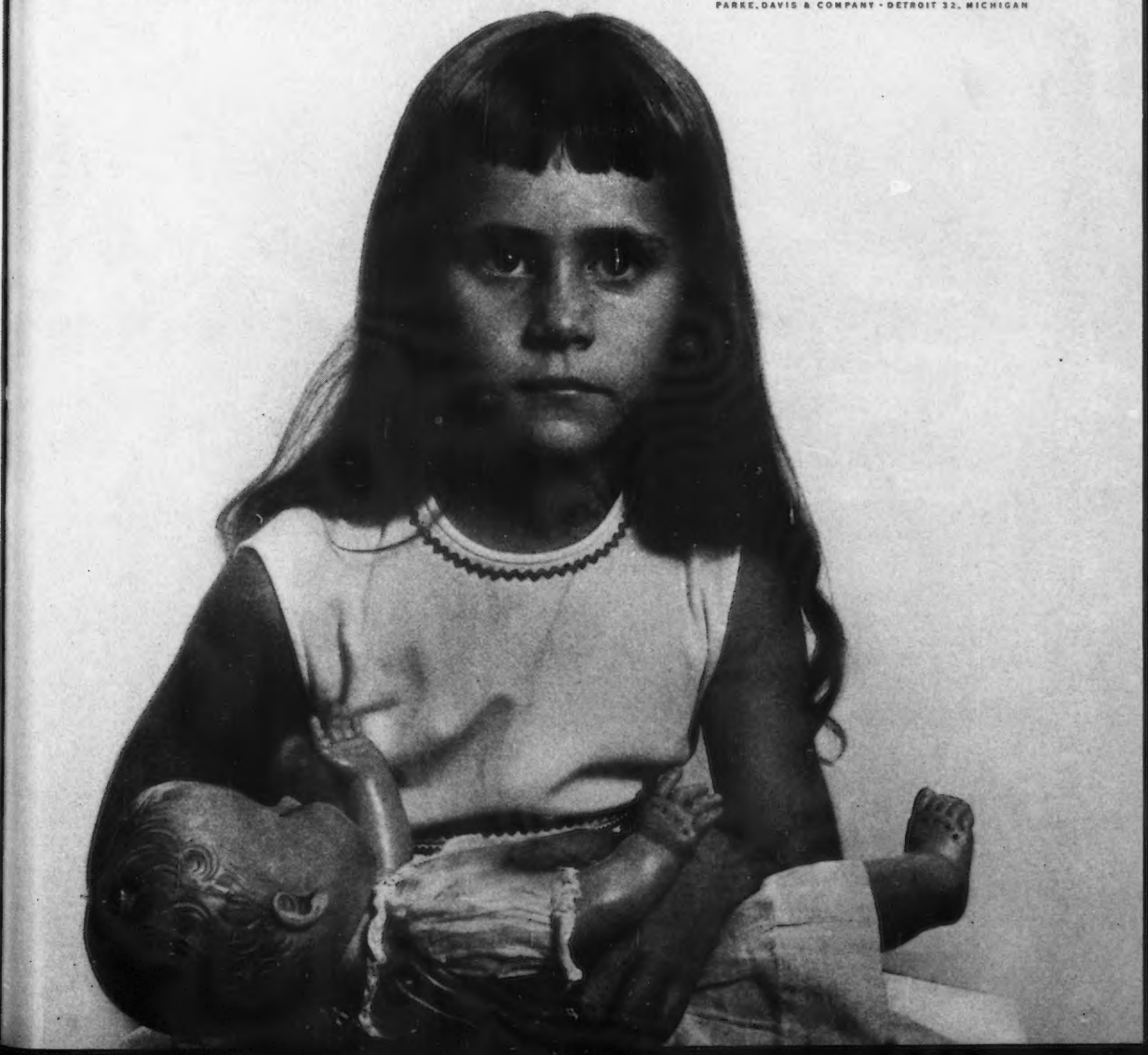

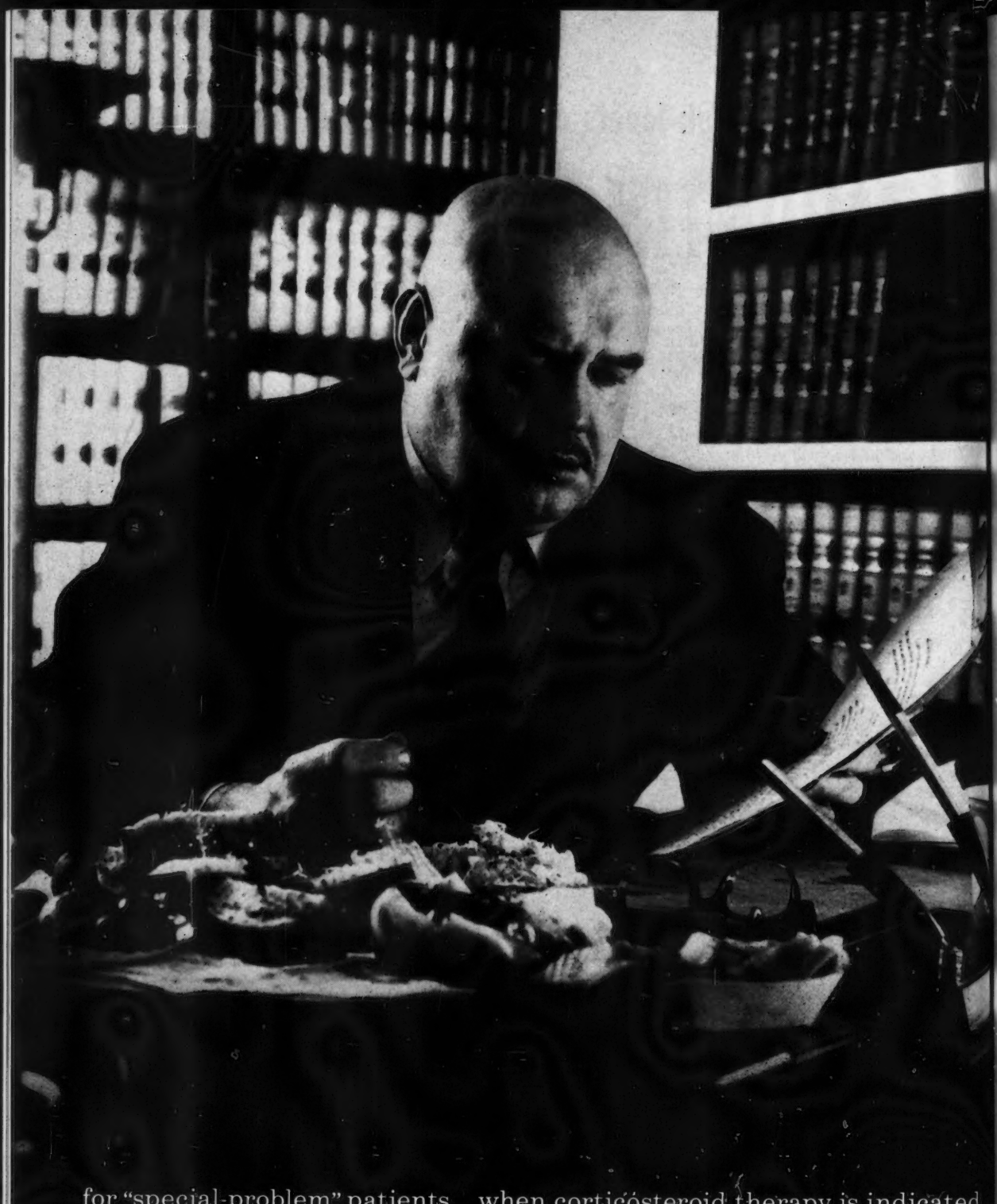

for "special-problem" patients... when corticosteroid therapy is indicated

Aristocort®

in rheumatoid arthritis

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UNSURPASSED "GENERAL-PURPOSE" STEROID
OUTSTANDING FOR "SPECIAL-PURPOSE" THERAPY

ARISTOCORT Triamcinolone has long since proved its *unsurpassed efficacy and relative safety* in treating rheumatoid arthritis. Mounting clinical evidence has shown that ARISTOCORT is also highly valuable for the "special-problem" arthritic – the patient who, because of certain complications, was hitherto considered a poor candidate for corticosteroids.

for example:

SPECIAL PROBLEM: ANXIETY-TENSION

When triamcinolone was used, euphoria and psychic unrest rarely occurred. (McGavack, T. H.: *Clin. Med.* 6:997 [June] 1959.)

SPECIAL PROBLEM: OVERWEIGHT

No patient developed voracious appetite on triamcinolone. Preferable for the overweight person whose appetite is undesirably stimulated by other steroids. (Freyberg, R. H.; Berntsen, C. A., Jr., and Hellman, L.: *Arthritis & Rheumatism* 1:215 [June] 1958.)

SPECIAL PROBLEM: EDEMA

Since it does not produce edema, triamcinolone is useful in rheumatoid arthritis patients with cardiac decompensation who need steroid therapy. (Hollander, J. L.: *J.A.M.A.* 172:306 [Jan. 23] 1960.)

SPECIAL PROBLEM: HYPERTENSION

Triamcinolone may be included among the currently available antirheumatic steroids having the least tendency to cause sodium retention. (Ward, L. E.: *J.A.M.A.* 170:1318 [July 11] 1959.)

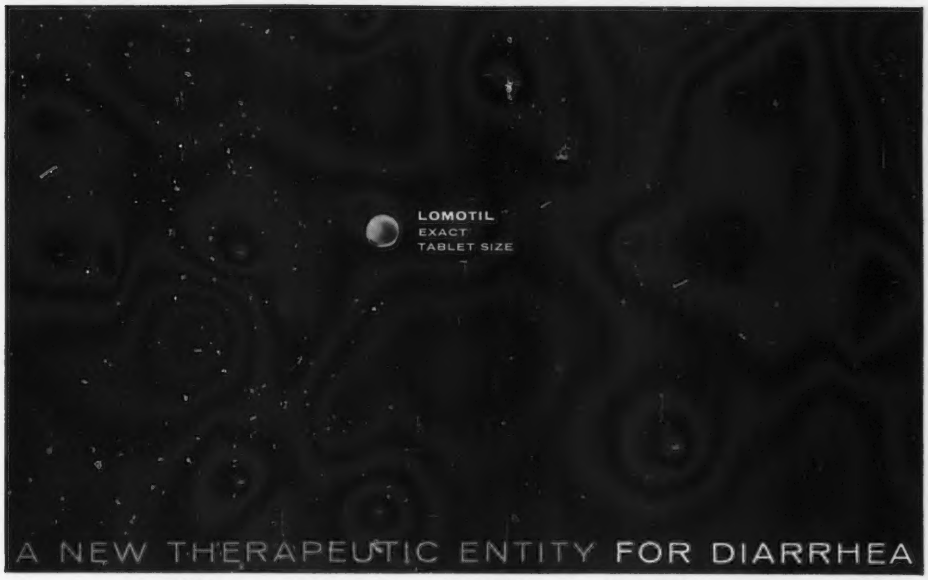
Hypertension did not result from triamcinolone therapy. Existing hypertension was reduced sometimes. This may have been due to lack of sodium retention. (Freyberg, R. H.; Berntsen, C. A., Jr., and Hellman, L.: *Arthritis & Rheumatism* 1:215 [June] 1958.)

Precautions: Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. In the treatment of rheumatoid arthritis, dosage should be individualized and kept at the lowest level needed to control symptoms. Dosage should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

Supplied: Scored tablets—1 mg. (yellow); 2 mg. (pink); 4 mg. (white); 16 mg. (white). Also available—syrup, parenteral and various topical forms.

Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



LOMOTIL®

SELECTIVELY LOWERS PROPULSIVE MOTILITY

LOMOTIL represents a major advance over the opium derivatives in controlling the propulsive hypermotility occurring in diarrhea.

Precise quantitative pharmacologic studies demonstrate that Lomotil controls intestinal propulsion in approximately $\frac{1}{11}$ the dosage of morphine and $\frac{1}{20}$ the dosage of atropine and that therapeutic doses of Lomotil produce few or none of the diffuse untoward effects of these agents.

Clinical experience in 1,314 patients amply supports these findings. Even in such a severe test of antidiarrheal effectiveness as the colonic hyperactivity in patients with colectomy, Lomotil is effective in significantly slowing the fecal stream.

Whenever a paregoric-like action is indicated, Lomotil now offers positive antidiarrheal control ... with safety and greater convenience. In addition, as a nonrefillable prescription product, Lomotil offers the physician full control of his patients' medication.

EFFICACY AND SAFETY of Lomotil are indicated by its low median effective dose. As measured by inhibition of charcoal propulsion in mice, Lomotil was effective in about $\frac{1}{11}$ the dosage of morphine hydrochloride and in about $\frac{1}{20}$ the dosage of atropine sulfate.

PRECAUTION: Lomotil should be used with considerable caution in patients having liver disease and those receiving drugs with a definite addiction potential. It is recommended that patients receiving a combination of barbiturates and Lomotil be observed closely for evidence of barbiturate toxicity and/or potentiation.

Recommended dosages should not be exceeded.

DOSAGE: The recommended initial dosage for adults is two tablets (5 mg.) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ($\frac{1}{2400}$ gr.) of atropine sulfate to discourage deliberate overdosage.

Subject to Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' New Product Brochure No. 81 from

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Research in the Service of Medicine

Diet or Drugs?

In the long term control of serum cholesterol, dietary therapy can achieve the objective in the manner most closely approximating physiological norm.

The long term control of elevated serum cholesterol through changes in the dietary pattern of the patient puts nature's own process to work most effectively to achieve the objectives of treatment. Here are the beneficial features of dietary therapy:

Offers a solution to the related problems of obesity.

Involves little or no added expense to the patient.

May be used with complete safety.

Produces no adverse side effects.

Preferable for the long-term management of a chronic condition.

Brings about reduction of serum cholesterol through physiological processes, as yet not fully understood.

Does not usually generate new compounds in the blood, thus helping the doctor make a more accurate analysis of blood serum cholesterol.

Elevated serum cholesterol has now been linked to an imbalance in the ratio of the type of fat in the diet. Reductions in cholesterol levels have been achieved repeatedly, both in medical research and practice, through the control of total calories and through the replacement of an appreciable percentage of saturated fat by poly-unsaturated vegetable oil.

An important measure in achieving replacement is the consistent use of poly-unsaturated pure vegetable oil in food preparation in place of saturated fat.

Free Wesson recipes for delicious main dishes, desserts and salad dressings are available for your patients. Request quantity needed from The Wesson People, Dept. N, 210 Baronne St

Poly-unsaturated Wesson is unsurpassed by any readily available brand, where a vegetable (salad) oil is medically recommended for a cholesterol depressant regimen.

Wesson is poly-unsaturated . . . never hydrogenated

More acceptable to patients. Wesson is preferred for its supreme delicacy of flavor, increasing the palatability of food without adding flavor of its own.

Uniformity you can depend on. Wesson has a poly-unsaturated content better than 50%. Only the lightest cottonseed oils of high iodine number are selected for Wesson, and no significant variations are permitted in the 22 exacting specifications required before bottling.

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Wesson is 100% cottonseed oil...winterized and of selected quality

Linoleic acid glycerides (poly-unsaturated)	50-55%
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Total unsaturated	70-75%
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Phytosterol (Predominantly beta sitosterol)	0.3-0.5%
Total tocopherols	0.09-0.12%

Never hydrogenated—completely salt free

Lifts depression...

You see an improvement within a few days
Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed – *often in a few days.* She eats well, sleeps well and soon returns to her normal activities.

..as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety... rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient *–they often aggravate anxiety and tension.*

And although amphetamine-barbiturate combinations may counteract excessive stimulation–*they often deepen depression.*

In contrast to such "seesaw" effects, Deprol's smooth, *balanced* action lifts depression as it calms anxiety–both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function–frequently reported with other antidepressant drugs.

Bibliography *(13 clinical studies, 858 patients)*: **1.** Alexander, L. (35 patients): Chemotherapy of depression – Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. **2.** Bateman, J. C. and Carlton, H. N. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. **3.** Beerman, H. M. (44 patients): The treatment of depression with meprobamate and benactyzine hydrochloride. Western Med. 1:10, March 1960. **4.** Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **5.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **6.** Gordon, P. E. (50 patients): Deprol in the treatment of depression. Dis. Nerv. System 21:215, April 1960. **7.** Landman, M. E. (50 patients): Clinical trial of a new antidepressive agent. J. M. Soc. New Jersey. In press, 1960. **8.** McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression – New technics and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. **9.** Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. **10.** Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. **11.** Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. **12.** Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy 7:28, Jan. 1960. **13.** Splitter, S. R. (84 patients): Treatment of the anxious patient in general practice. J. Clin. & Exper. Psychopath. In press, April-June 1960.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.
Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

Deprol®

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Use of Female Hormone Feasible for Men

The long-term therapeutic use of female hormones in men has been found to be "entirely feasible," a report in the Sept. 17 *Journal of the American Medical Association* said.

The effects of female hormones (estrogens) prescribed for men recovering from heart attacks were reported by Drs. Jessie Marmorston, Oscar Magdison, Oliver Kuzma and Frederick J. Moore, Los Angeles.

All of the patients had suffered heart attacks (myocardial infarctions) as a result of hardening of the coronary arteries that surround the heart. A high content of fats in the blood is believed to be involved in the development of hardening of the arteries. Estrogens were administered to the patients to reduce their elevated blood fat levels.

The authors said the ability of estrogens to reduce fats in the blood is "well established" but their use has been limited in men because they can cause feminization.

However, they said, "our findings indicate clearly that the long-term investigative administration of small to moderate doses of estrogen to men with myocardial infarction is entirely feasible."

The findings were based on a study of 109 men, ranging from 35 to 83 years of age, who were treated with estrogens for a total of more than 900 months.

Each patient was started on a small dose which was increased little by little over a considerable period of time.

"With this gradual approach to tolerance, clinical side-effects have been observed in most patients at some time in the course of therapy but have presented no obstacle to continuation of therapy," the physicians said.

The first manifestation in almost every case was pain or tenderness of the breast, they said. Of 44 patients available for observation for some months after this symptom appeared, they said, 15 tolerated the same dosage thereafter and 17 tolerated an even greater dosage whereas in only 12 was it necessary to reduce the dosage.

Platinum Blonde Bleaching Makes Hair Dangerously Brittle

The extreme degree to which hydrogen peroxide bleaching must be carried out to render the hair platinum blonde "usually make the hair dangerously brittle," says the *Journal of the American Medical Association.*

The effects of hydrogen peroxide were discussed by Veronica L. Conley, Ph.D., director of the A.M.A. department of nursing, in answer to a question submitted to the *Journal.*

"Adverse reactions to bleaching of the hair are

(Continued on Page 68)

BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE *are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.*

ARTEFACTS AND HANDLING AND PROCESSING FAULTS ON X-RAY FILMS—Prof. Dr. E. A. Zimmer, Berne, Switzerland. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1960. 67 pages, 128 figures, $5.75.

ATLAS OF CLINICAL HEMATOLOGY—Katsuji Kato, Ph.D., M.D., Professor of Physiology (Hematology), Tokyo Medical College. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1960. 296 pages, $25.00.

CAMPS FOR DELINQUENT BOYS—A guide to Planning—George H. Weber, Consultant on Diagnostic and Clinical Treatment Services in Institutions, Technical Aid Branch, Division of Juvenile Delinquency Service. U. S. Department of Health, Education, and Welfare, Social Security Administration, Children's Bureau, 1960. Children's Bureau Publication No. 385-1960. Single copies of "Camps for Delinquent Boys" are available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 25 cents each.

CAREERS IN PEDIATRICS—Report of the Thirty-sixth Ross Conference on Pediatric Research. Published by Ross Laboratories, Columbus 16, Ohio.

CARE OF THE WELL BABY—Medical Management of the Child from Birth to 2 Years of Age—Kenneth S. Shepard, M.D., Director of Well Baby Clinics, Northwestern University School of Medicine; Staff Examiner, Infant Welfare Society, Evanston; Pediatrician, Evanston Hospital Association and St. Francis Hospital, Evanston; American Board of Pediatrics. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1960. 224 pages, $3.25.

CIBA FOUNDATION COLLOQUIA ON ENDOCRINOLOGY—Volume 13, Human Pituitary Hormones, in honour of Professor B. A. Houssay, For. Mem. R.S. G.E.W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc., editors for the Ciba Foundation. Little, Brown & Company, 34 Beacon Street, Boston, Mass., 1960. 336 pages, 86 illustrations. $9.50.

CLINICAL OBSTETRICS AND GYNECOLOGY—September 1960—Volume 3, No. 3—Bleeding and Hemorrhage in Late Pregnancy, R. Gordon Douglas, M.D., Editor; Frigidity, Edward C. Mann, M.D.; The Obstetric Forceps, Puerperal Fever, and Gynecology Becomes a Surgical Specialty, Harold Speert, M.D. A Quarterly Book Series, published by Paul B. Hoeber, Inc., Medical Division of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y., 1960. $18.00 a year for four consecutive numbers issued quarterly (by subscription only).

COMPLICATIONS IN SURGERY AND THEIR MANAGEMENT—Edited by Curtis P. Artz, M.D., F.A.C.S., Associate Professor of Surgery of the University of Mississippi, and James D. Hardy, M.D., F.A.C.S., Professor and Chairman of the Department of Surgery of the University of Mississippi. With Contributions by Sixty-Nine Authorities. W. B. Saunders Company, Philadelphia, 1960. 1075 pages, $23.00.

CONGENITAL MALFORMATIONS — Ciba Foundation Symposium—G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc., editors for the Ciba Foundation. Little, Brown & Company, 34 Beacon Street, Boston, Mass., 1960. 308 pages, 91 illustrations, $9.00.

DIVERTICULITIS—Sara M. Jordan, M.D., Founder and Former Head of the Department of Gastroenterology. The Lahey Clinic; member of the Staff, New England Baptist Hospital, and New England Deaconess Hospital, Boston, Massachusetts; and Russell S. Boles, Jr., M.D., member of the staff, Department of Gastroenterology, The Lahey Clinic; New England Baptist Hospital, and New England Deaconess Hospital, Boston, Massachusetts. Modern Medical Monographs 21—Irving S. Wright, M.D., Editor in Chief, and Richard H. Orr, M.D., Consulting Editor. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N.Y., 1960. 90 pages, $4.75.

FUNDAMENTALS OF CHEST ROENTGENOLOGY—Benjamin Felson, M.D., Professor and Director, Department of Radiology, University of Cincinnati College of Medicine; Director, Departments of Radiology, Cincinnati General, Children's, Daniel Drake, Dunham, Christian R. Holmes, and Longview Hospitals; and Special Consultant, United States Public Health Service. W. B. Saunders Company, Philadelphia, 1960. 301 pages, with 450 illustrations on 238 figures, $10.00.

THE MANAGEMENT OF FRACTURES AND SOFT TISSUE INJURIES—by the Committee on Trauma, American College of Surgeons. Based on An Outline Of The Treatment of Fractures, Seventh Edition, and Early Care of Acute Soft Tissue Injuries, Second Edition. W. B. Saunders Company, Philadelphia, 1960. 372 pages, $5.00.

MEDICAL AND BIOLOGICAL RESEARCH IN ISRAEL—Moshe Prywes, editor. Published by The Hebrew University of Jerusalem and Hadassah, The Women's Zionist Organization of America, 1960. Obtainable through Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y. (for the Americas). 562 pages, $8.00.

MODERN OCCUPATIONAL MEDICINE—2nd Edition—Thoroughly Revised; A. J. Fleming, M.Sc., M.D., F.A.C.P., Medical Director, E. I. du Pont de Nemours & Company, and C. A. D'Alonzo, M.D., F.A.C.P., Assistant Medical Director, Medical Division, E. I. du Pont de Nemours & Company, Editors. J. A. Zapp, Ph.D., Director, Haskell Laboratory for Toxicology and Industrial Medicine, E. I. du Pont de Nemours & Company, Associate Editor. Lea & Febiger, Washington Square, Philadelphia 6, Pa., 1960. 587 pages, $12.00.

OUTLINE OF PATHOLOGY—John H. Manhold, Jr., D.M.D., M.A., F.A.C.D., Professor and Director of Oral Diagnosis and Pathology for the College of Dentistry, Seton Hall College of Medicine and Dentistry; Attending Pathologist, Jersey City Medical Center; and Theodore E. Bolden, D.D.S., M.S., Ph.D. Assistant Professor of Oral Diagnosis and Pathology, College of Dentistry, Seton Hall College of Medicine and Dentistry; and Attending Pathologist, Jersey City Medical Center. W. B. Saunders Company, Philadelphia, Pa., 1960. 340 pages, $4.75.

PROJECTIVE TECHNIQUES WITH CHILDREN—Albert I. Rabin and Mary R. Haworth, editors. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1960. 392 pages, $11.75.

PROTEIN AND AMINO ACID REQUIREMENTS IN EARLY LIFE—L. Emmett Holt, Jr., M.D., Department of Pediatrics, New York University; Paul György, M.D., Department of Pediatrics, University of Pennsylvania; Edward L. Pratt, M.D., Department of Pediatrics, University of Texas; Selma E. Snyderman, M.D., Department of Pediatrics, New York University; and William M. Wallace, M.D., Department of Pediatrics, Western Reserve University. New York University Press, Washington Square, New York 3, N.Y., 1960. 63 pages, $1.00 paper edition.

PSYCHOLOGY OF DEAFNESS, THE—Sensory Deprivation, Learning, and Adjustment—Helmer R. Myklebust, Northwestern University. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1960. 393 pages, $7.75.

STRUCTURE AND DYNAMICS OF THE HUMAN MIND, THE—Edoardo Weiss, M.D., Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1960. 472 pages, $8.75.

TREATMENT OF CANCER AND ALLIED DISEASES—SECOND EDITION—Tumors of the Breast, Chest, and Esophagus, Volume IV. By Sixty-seven Authors. George T. Pack, M.D., F.A.C.S., and Irving M. Ariel, M.D., F.A.C.S., editors. Paul B. Hoeber, Inc., Medical Division of Harper & Brothers. 49 East Thirty Third Street, New York 16, N.Y., 1960. 667 pages, $30.00.

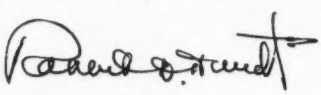
YEAR BOOK OF OBSTETRICS AND GYNECOLOGY (1960-1961 Year Book Series)—edited by J. P. Greenhill, B.S., M.D., F.A.C.S., F.I.C.S. (Honorary) Professor of Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist, Cook County Hospital; and Senior Attending Obstetrician and Gynecologist, Michael Reese Hospital. The Year Book Publishers, Incorporated, 200 East Illinois Street, Chicago 11, Ill., 1960. 576 pages, $8.00.

Armour Pharmaceutical Company extends its thanks to the profession

In the several months since the introduction of our new enteric-protected anti-inflammatory enzyme tablet, Chymoral, we have received some very encouraging comments from the profession regarding its clinical success in the enzymatic management of inflammatory processes. We would like to extend our thanks to those who have already used and commented on Chymoral. Since we are deeply interested in extending our knowledge of the therapeutic range of this new product, we will welcome any further comments you may want to make. To those who have not yet used Chymoral, we extend an offer to give it a therapeutic trial.

The therapeutic and prophylactic effects of Chymoral include anti-inflammatory, antiedematous and mucolytic activities.[1-6] It liquefies thick secretions in bronchitis and in asthma with bronchitis; eases the racking cough of emphysema and increases elimination of bronchial secretion; cuts healing time in accidental or surgical trauma; is a useful adjunctive therapy in inflammatory dermatoses; encourages healing in gynecologic conditions; reduces pain and swelling and thus promotes faster healing in urologic conditions; and reduces the extent of inflammatory changes in ophthalmic and otorhinolaryngic conditions.*

We are very pleased indeed that the product has found a useful place in the range of therapeutic tools available to the doctor for management of the inflammatory process. Armour feels that enzymes are a new and exciting development in anti-inflammatory therapy; one which may well carry chemotherapeutics forward a long step.



Robert A. Hardt
President

1. Beck, C.; Levine, A. J.; Davis, O. F., and Horwitz, B.: Clinical Studies with an Oral Anti-inflammatory Enzyme Preparation. Clin. Med. 7:519, 1960. 2. Billow, B. W.; Cabodeville, A. M.; Stern, A.; Palm, A.; Robinson, M., and Paley, S. S.: Clinical Experience with an Oral Anti-inflammatory Enzyme for Intestinal Absorption. Southwestern Med. *41*:286, 1960. 3. Teitel, L. H.; Seigel, S. J.; Tendler, J.; Reiser, P., and Harris, S. B.: Clinical Observations with Chymotrypsin in 306 Patients. Indust. Med. & Surg. *29*:150, 1960. 4. Clinical Reports to the Medical Dept., Armour Pharmaceutical Company, 1959. 5. Reich, W. J., and Nechtow, M. J.: Scientific Exhibit, Chicago Medical Society (March) 1960. 6. Taub, S. J.: Paper presented Annual Meeting Pi Lambda Kappa Medical Fraternity, Miami, Florida (March) 1960.

**Initial dosage is 2 tablets q.i.d. Maintenance, 1 tablet q.i.d.*

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Fostex® treats their acne while they wash

degreases the skin	helps remove blackheads	dries and peels the skin
completely emulsifies and washes off excess oil from the skin.	penetrates and softens comedones, unblocks pores and facilitates removal of sebum plugs.	removes papule coverings and permits drainage of sebaceous glands.

Patients like Fostex because it is so easy to use. They simply wash acne skin 2 to 4 times a day with Fostex Cream or Fostex Cake, instead of using soap.

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*sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate and sodium dioctyl sulfosuccinate.

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Fostex Cream and Fostex Cake are interchangeable for therapeutic washing of the skin. Fostex Cream is approximately twice as drying as Fostex Cake.

Fostex Cream is also used as a therapeutic shampoo in dandruff and oily scalp.

Write for samples.

WESTWOOD PHARMACEUTICALS • Buffalo 13, New York

Platinum Blonde Bleaching Makes Hair Dangerously Brittle

(Continued from Page 64)

primarily limited to the hair shaft itself," she said.

"Future growth and inherent physical characteristics are not affected. Skin reactions may occur in some persons, but reported cases are few in comparison with the large number who bleach their hair.

"Bleaching damages the hair because the hydrogen peroxide must penetrate to the cortex of the hair where the hair pigment is located. In so doing, it often leaves the hair dry, brittle, and more absorbent.

"The extent of hair damage depends on several variables, one of which is the degree of bleaching. For example, the extreme degree to which bleaching must be carried out to render the hair platinum blonde usually makes the hair dangerously brittle.

"Furthermore, a recent study has demonstrated that when hair is bleached, the ensuing damage does not stop with the process. With each shampoo certain decomposition products and oxidized pigments are extracted from the hair shaft and damage recurs."

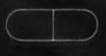
The exact nature of the damage is unknown which "accounts at least in part for the lack of methods to protect the hair against the deleterious effects of hydrogen peroxide," Dr. Conley said.

to encourage colonic peristalsis without whipping the bowel

DORBANE

DORBANTYL

DORBANTYL FORTE



The active principle of Dorbane reaches the colon through the circulation. It acts directly and selectively upon the intrinsic plexus of the colon. The small bowel is not affected. Within 6 to 12 hours evacuation occurs without cramping or griping. Nonhabituating. Each scored tablet of Dorbane contains 75 mg., and each teaspoonful of orange-flavored liquid contains 37.5 mg. of 1,8 dihydroxyanthraquinone. Suitable for patients of all ages.

Dorbantyl combines the colonic stimulant action of Dorbane (25 mg.) with the stool-softening effect of dioctyl sodium sulfosuccinate (50 mg.), an inert and safe surface-wetting agent, in each orange-and-black capsule or teaspoonful of orange-pineapple-flavored suspension.

Dorbantyl Forte offers double strength dosage of the Dorbantyl combination for greater convenience and economy for patients requiring extra potency. In orange-and-gray capsules only.

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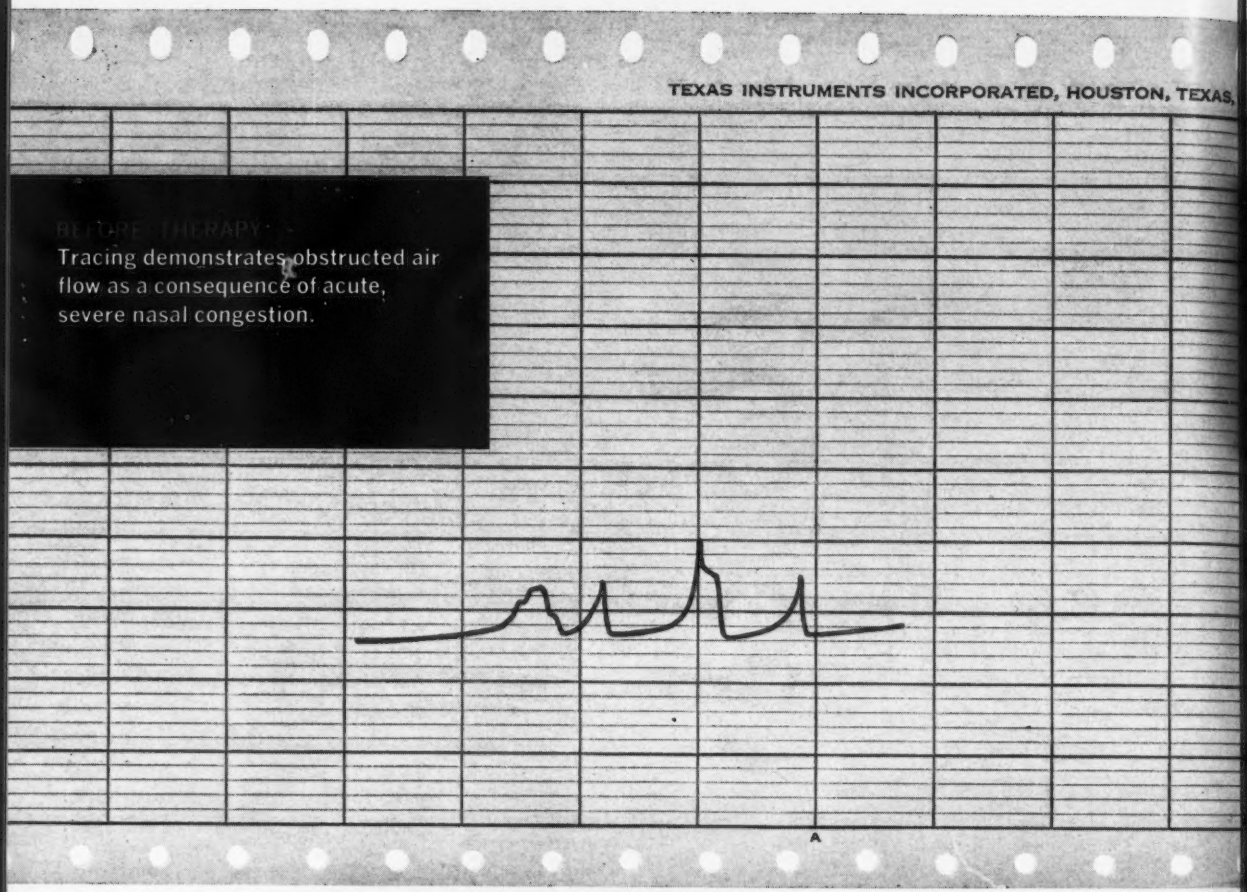
Northridge, California



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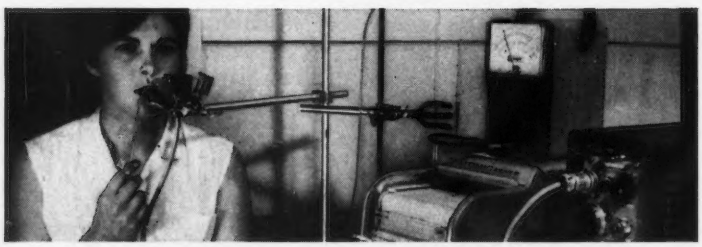

Photo shows use of electronic rhinograph, a new technique to measure air flow and response to decongestant therapy, using same subject as control.

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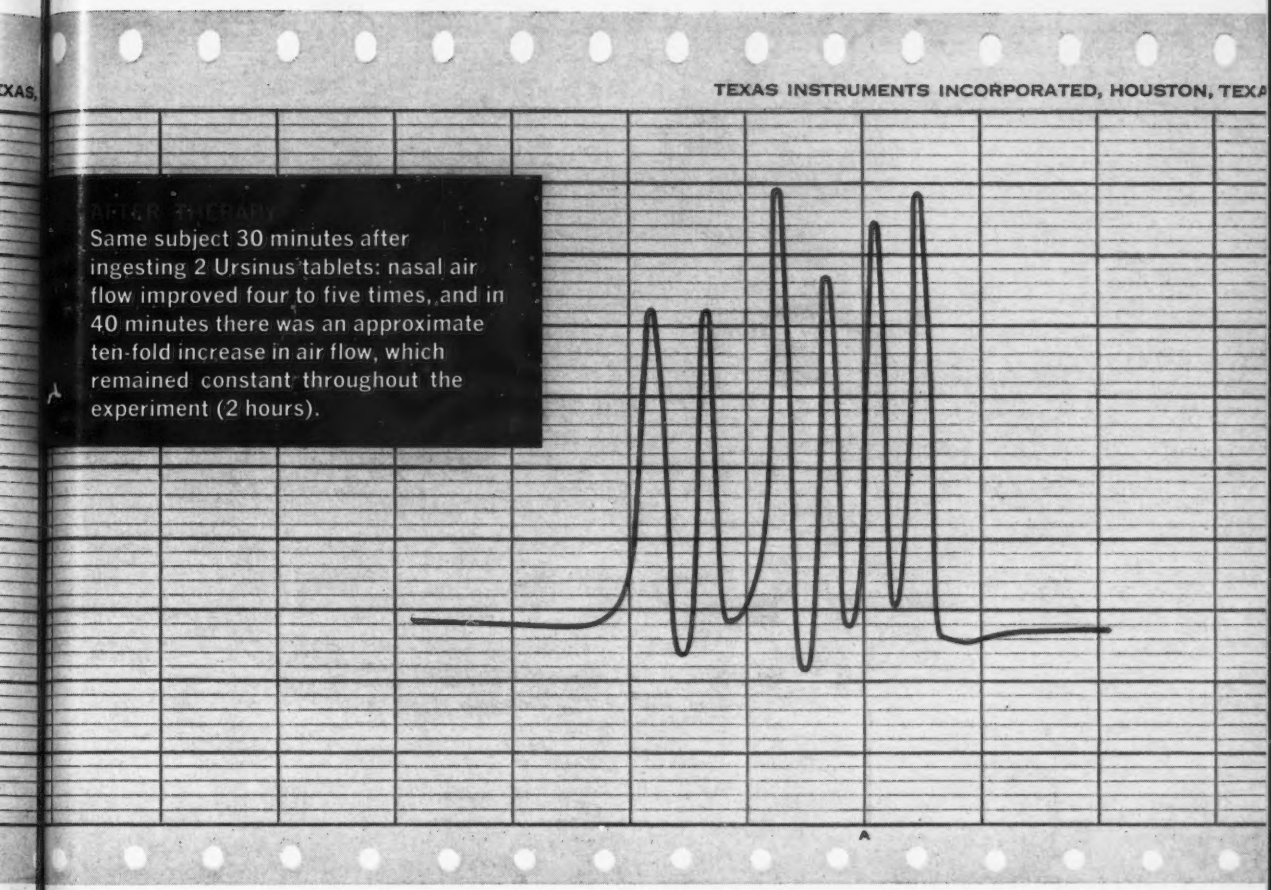

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Each URSINUS Inlay-Tab contains: phenylpropanolamine HCl, 25 mg.; pheniramine maleate, 12.5 mg.; pyrilamine maleate 12.5 mg.; Calurin® (calcium acetylsalicylate carbamide, equiv. to aspirin 300 mg.) Dose: 1 or 2 tablets every 4 to 6 hours. Supplied in bottles of 100 URSINUS tablets.

this hypertensive patient prefers Singoserp... and so does his physician

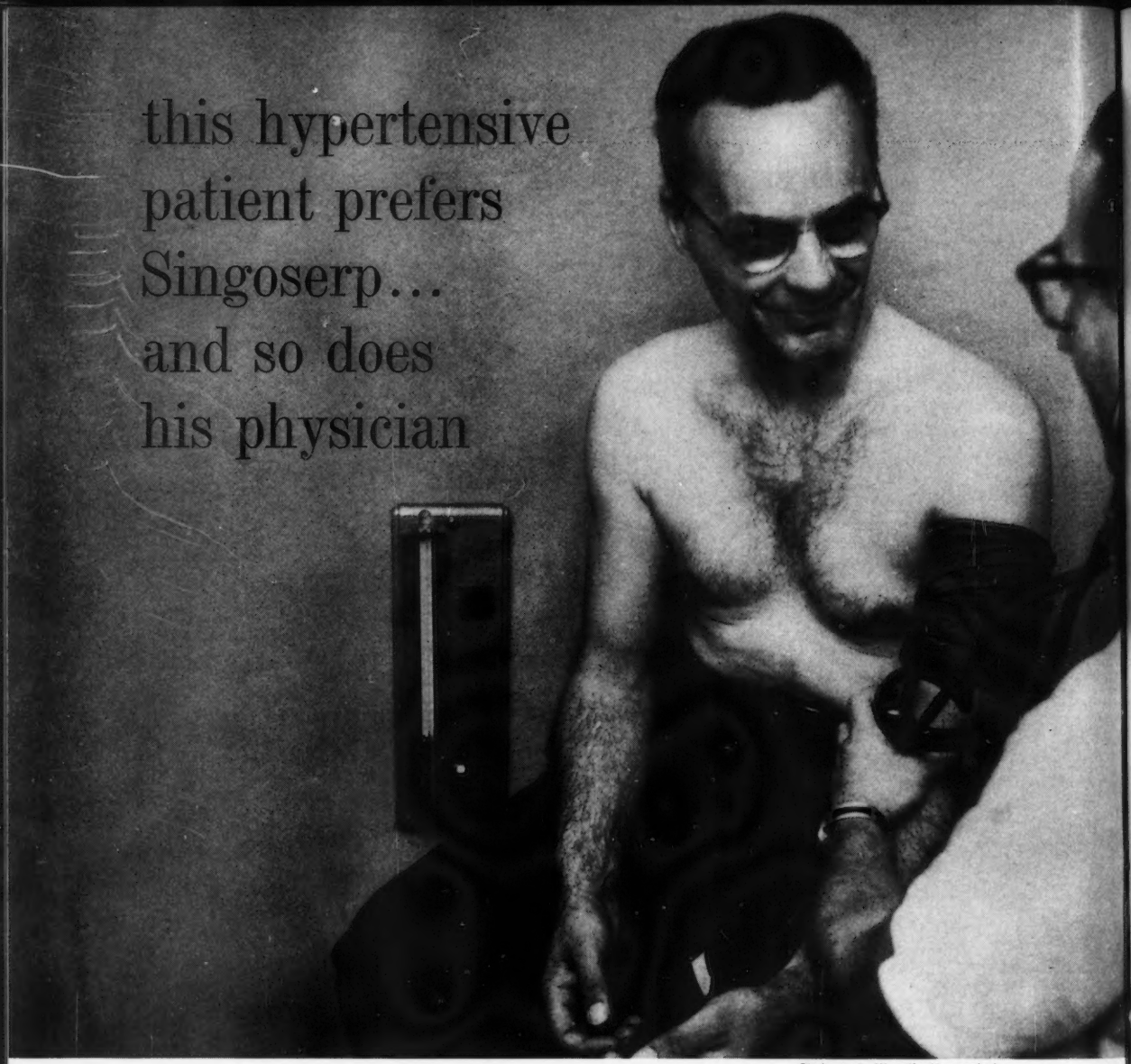

Photo used with patient's permission.

Patient's comment: "The other drug [whole root rauwolfia] made me feel lazy. I just didn't feel in the mood to make my calls. My nose used to get stuffed up, too. This new pill [Singoserp] doesn't give me any trouble at all."

Clinician's report: J. M., a salesman, had a 16-year history of hypertension. Blood pressure at first examination was 190/100 mm. Hg. Whole root rauwolfia lowered pressure to 140/80 — but side effects were intolerable. Singoserp, 0.5 mg. daily, further reduced pressure to 130/80 and eliminated all drug symptoms.

Many hypertensive patients and their physicians prefer Singoserp® because it usually lowers blood pressure without rauwolfia side effects

SUPPLIED: Singoserp **Tablets,** 1 mg. (white, scored). Also available: Singoserp®-Esidrix® **Tablets** #2 (white), each containing 1 mg. Singoserp and 25 mg. Esidrix; Singoserp®-Esidrix® **Tablets** #1 (white), each containing 0.5 mg. Singoserp and 25 mg. Esidrix. **Complete information sent on request.**
Singoserp® (syrosingopine CIBA) Singoserp®-Esidrix® (syrosingopine and hydrochlorothiazide CIBA)

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Remission in 82%; relief in 92%. So reports an investigator who recently studied ANTIVERT in dizziness.[1] After studying 50 patients, Scal concluded that "Those with Meniere's syndrome who were given the preparation [ANTIVERT] in the early stages of this condition, reported prompt improvement in the relief of dizziness, headaches and tinnitus."[1]

ANTIVERT combines meclizine (12.5 mg.) with nicotinic acid (50 mg.). Prescribe one ANTIVERT tablet before each meal for relief of Meniere's syndrome, arteriosclerotic vertigo, labyrinthitis, and vertigo of nonspecific origin.

Supplied: In bottles of 100 blue-and-white scored tablets. Prescription only.

Reference: 1. Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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Science for the World's Well-Being™

Kidney Substance Linked to High Blood Pressure

New evidence has been found implicating the kidneys in the development of high blood pressure.

A recent study shows that a substance released by the kidneys, angiotensin, produced significant increases in the secretion of aldosterone, a hormone found in excess in cases of malignant hypertension.

Angiotensin is liberated as a result of altered blood circulation or a deficiency of blood in the kidney. Aldosterone is produced by the adrenal glands, which lie adjacent to the kidneys. The hormone accelerates kidney retention of sodium chloride, or salt, and elimination of potassium.

The studies were reported by Dr. John H. Laragh, department of medicine, Columbia University College of Physicians and Surgeons, New York City, in two articles in the Sept. 17 *Journal of the American Medical Association.*

Angiotensin, like norepinephrine and epinephrine also produced by the adrenal glands, tends to increase blood pressure. Dr. Laragh compared the effects of angiotensin with the other two substances.

Unlike norepinephrine and epinephrine, which had varying effects, he said, "infusion of angiotensin in seven subjects produced an increase in the aldosterone secretory rate in every experiment."

Angiotensin is released by an enzyme, termed renin, found in the blood-deficient kidney, Dr. Laragh explained. Aldosterone, by causing sodium retention, might tend to improve the kidney circulation leading in turn to suppression of the enzyme, he said.

"More work must be done, but it now seems that the approach to malignant hypertension should be aimed at measures to define and to correct abnormalities in the renal [kidney] circulation," he said. "Included in the therapeutic approach may be the feeding of added sodium chloride in an attempt to improve the renal circulation, rather than its deprivation, as has been popular heretofore."

Co-authors of one of Dr. Laragh's reports are Marielena Angers, M.D.; William G. Kelly, Ph.D., and Seymour Lieberman, Ph.D., all of New York City.

Antidepressant Drug Aids Mild Diabetics

A drug designed to fight mental depression, imipramine hydrochloride, has been found to benefit persons with mild diabetes.

Results obtained in five patients are reported by four Cincinnati physicians in a preliminary communication in the Oct. 1 *Journal of the American Medical Association.*

The effect of the drug was noted when it was prescribed for several mild diabetics who were also

(Continued on Page 76)

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capsules

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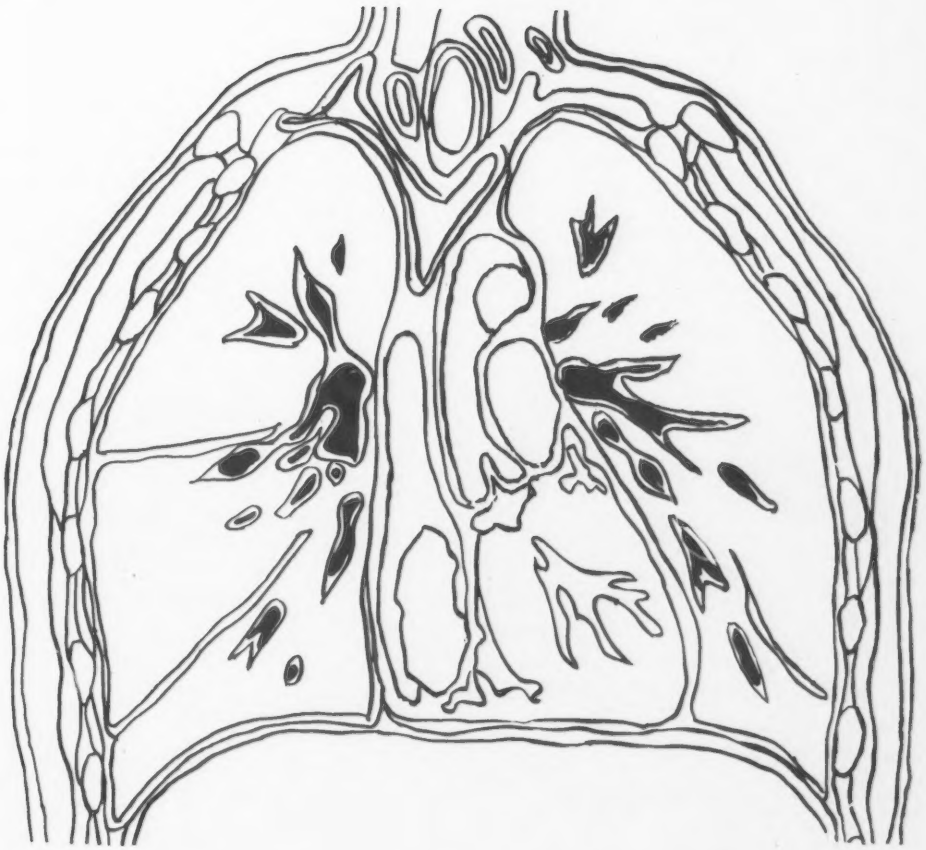

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SUPPLY: TETREX Capsules—tetracycline phosphate complex—each equivalent to 250 mg. tetracycline HCl activity. Bottles of 16 and 100.

TETREX Syrup—tetracycline (ammonium polyphosphate buffered) syrup—equivalent to 125 mg. tetracycline HCl activity per 5 ml. teaspoonful. Bottles of 2 fl. oz. and 1 pint.

Military Study Shows Surgery Effective Against TB

Surgical intervention proved 97 per cent effective in curing advanced tuberculosis of the lung among a selected group of military personnel and their dependents.

The study was conducted by Col. David E. Thomas and Lt. Col. Elmore M. Aronstam, MC, at Valley Forge Army Hospital, Phoenixville, Pa.

Writing in the September 3 *Journal of the American Medical Association*, the physicians said the disease was found to be inactive in 378 of 391 patients followed up five years after they underwent surgical removal of part of a lung.

Of the 378, 370 (98 per cent) were capable of employment, they said.

"Consideration of the results obtained in this study leaves no room for doubting the value of excisional surgery in tuberculosis, both as a means of controlling the disease and as an aid in the economic rehabilitation of the individual patient," they said.

However, the authors pointed out that the results were obtained under "ideal circumstances" inasmuch as the patients were selected, relatively young, and easy to control being subject to military discipline.

"The number of soldiers rehabilitated and returned to duty [131] is the important statistic from a military standpoint," they wrote.

"A large number of those returned to duty are noncommissioned officers and officers, persons who represent a large investment in training and have valuable military skills. Without excisional surgery most of them would have been retired."

Antidepressant Drug Aids Mild Diabetics

(Continued from Page 74)

depressed. Administration of the drug was followed by a decrease in the amount of sugar excreted. A high level of sugar excretion is a symptom of diabetes, which is a disorder that prevents the body from utilizing sugar normally.

Each subject's response to the drug and to discontinuance of it was tested several times, the authors said. However, they stressed that their findings were not conclusive because of the small number of patients studied.

Further investigation is warranted, they said, because it is important to study any agent that demonstrates an effect on the clinical course of diabetes.

The authors are Drs. Stanley M. Kaplan, James W. Maas, John M. Pixley, and W. Donald Ross, who are associated with the University of Cincinnati College of Medicine and the Cincinnati General Hospital.

Preludin®

brand of phenmetrazine hydrochloride

reduces the problems of reducing

whether obesity is simple or complicated

Through the potent appetite-suppressant action of Preludin, the success of anti-obesity treatment becomes more assured—adherence to diet becomes easier—discomfort from side reactions is unlikely.

In Simple Obesity Preludin produces 2 to 5 times the weight loss achievable by dietary instruction alone.[1,2]

In Pregnancy Weight gain is kept within bounds, without danger to either mother or fetus.[3]

In Diabetes Insulin requirements are not increased; they may even decrease as weight is lost.[4]

In Hypertension Preludin is well tolerated and blood pressure may even fall as weight is reduced.[1]

Patients taking Preludin usually experience a mild elevation of mood conducive to an optimistic and cooperative attitude, thereby counteracting the lassitude otherwise resulting from a reduced caloric intake. Thus, consistent weight loss over a prolonged period becomes more assured.

Preludin® Endurets,[T.M.] brand of phenmetrazine hydrochloride: prolonged-action tablets of 75 mg. for once daily administration; and scored, square, pink tablets of 25 mg for b.i.d. or t.i.d. administration.

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References:
(1) Barnes, R. H.: J. A. M. A. *166*:898, 1958. (2) Ressler, C.: J. A. M. A. *165*:135, 1957. (3) Birnberg, C. H., and Abitbol, M. M.: Obst. & Gynec. *11*:463, 1958. (4) Robillard, R.: Canad. M. A. J. *76*:938, 1957.

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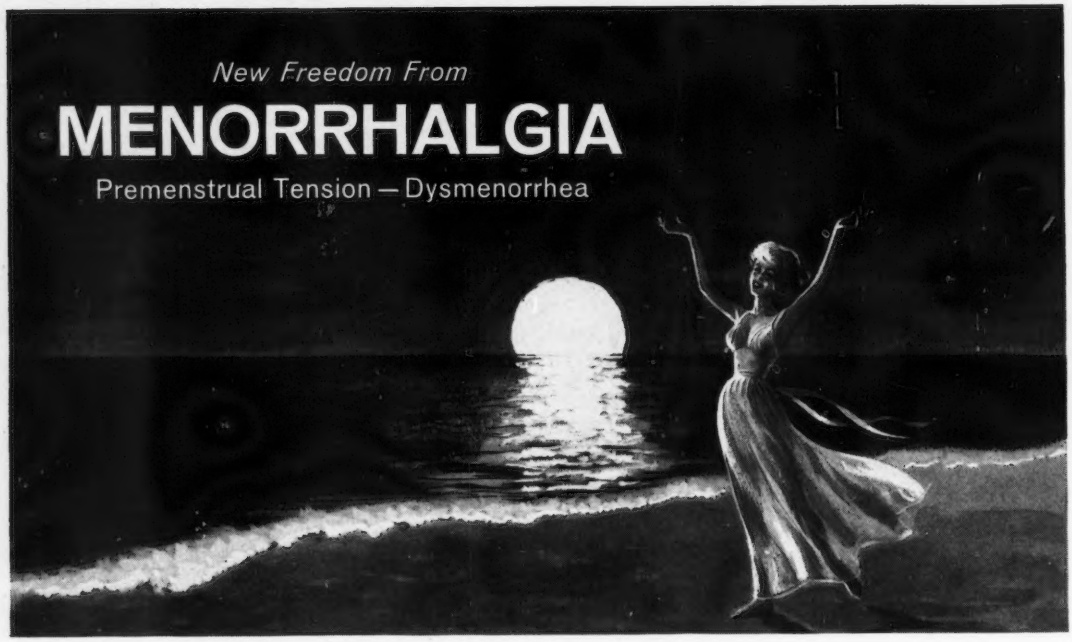

Lowering the tide of premenstrual edema is not the only phase of the menorrhalgic complex to be overcome. There is the possible allergic reaction of the patient to her own ovarian hormones—the resulting vascular congestion of the pelvic organs, and, finally, the pain frequently encountered with the oncoming flow.

Successful *non-hormonal* therapeutic management of premenstrual tension has been accomplished by the development of PAMPRIN* which has proved clinically effective in preventing and controlling organic and psychogenic symptoms such as anxiety, edema, breast engorgement, fatigue, irritability, lumbar pain, low abdominal pain, moodiness, etc., which so often accompany premenstrual tension. In addition, PAMPRIN is effective in relieving dysmenorrhea.

Clinical studies indicate that certain active ingredients [1, 2, 3, 4] of PAMPRIN fortified with the analgesics, acetophenetidin and salicylamide, produce effective relief of the entire spectrum of symptoms with minimal side effects. It exerts adequate diuresis by virtue of the component pamabrom (2-amino-2-methyl-1-propanol 8-bromotheophyllinate). It does not dehydrate below the normal water balance but produces a desirable sodium excretion with a clinically inconsequential loss of potassium. The antihistaminic compound, pyrilamine maleate, is present in a therapeutically correct ratio to the diuretic principle to alleviate autohormonal allergy.

*PAMPRIN, active ingredients: *Pamabrom 25 mg., Acetophenetidin 125 mg., Salicylamide 250 mg., Pyrilamine Maleate 12.5 mg.*

Dosage for premenstrual tension: 2 tablets q.i.d. at the onset of symptoms. For dysmenorrhea: 2 tablets q.i.d.

1. Bickers, W. M., M.D.; So. Med. Jour., Vol. 46, No. 9, pp. 873-878, Sept., 1953. 2. McGavack, T. H., M.D., Spoor, H. J., M.D., Stone, M. L., M.D., Pearson, S., Ph.D.; Amer. Jour. Obst. & Gyn., Vol. 72, No. 2, pp. 416-422, Aug., 1956. 3. McGavack, T. H., M.D., Spoor, H. J., M.D., Stone, M. L., M.D.; N.Y. State Jour. of Med., Vol. 56, No. 18, pp. 2846-2849, Sept. 15, 1956. 4. Kelly, A. J., M.D.; Jour. Med. Assn. Ga., Vol. 49, No. 5, pp. 243-244, May, 1960.

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Diuretic — Antihistaminic — Analgetic

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for relief of symptoms
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WANTED: GENERALISTS AND SPECIALISTS. California licensed for clinics, associations and partnerships. We cover all areas of the State. Hospital facilities and housing checked for you. Information gladly. CONTINENTAL-PACIFIC COAST MEDICAL BUREAU, Agency, 430 North Camden Drive, Beverly Hills, California, or 703 Market St., San Francisco.

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INTERNIST. Active non-tuberculous chest and medical ward. Excellent teaching program, library and research facilities. Salary from $10,635, depending on qualifications. Group life and health insurance; retirement benefits. Affiliated with three medical schools. Ideal for recent medical resident working toward Medical Boards. Write Director, Professional Services, VA Hospital, Long Beach, California.

ACCREDITED RESIDENCY—Internal Medicine—July 1st, 1961 appointments Eligible for California Licensure. CLINICAL AND/OR RESEARCH FELLOWSHIPS—$4,800-$5,400 per annum, available July 1st and January 1st, Cardiology, Chest Diseases and Hematology, minimum pre-requisite two years residency in Internal Medicine, eligible California licensure. Write Dr. Ernest Beutler, M.D., Chairman, Department of Medicine, City of Hope Medical Center, Duarte, California.

OBSTETRICIAN-GYNECOLOGIST, under 40, certified or eligible, three-man team, generous salary, potential partnership. GENERAL PRACTITIONER, with desire to work with Psychiatric Group, high remuneration. ORTHOPEDISTS, to age 35, excellent Peninsula affiliation, also southern California and San Francisco Bay area. UROLOGIST, Bay area association. INTERNIST and OTOLARYNGOLOGISTS, young, Board eligible for outstanding groups Southern California and Valley. CLINICAL RESEARCH—GENERAL PRACTITIONERS, exceptional opportunities throughout California. Norma Rohl, THE MEDICAL CENTER AGENCY, FLOOD BUILDING, Suite 410-414, 870 Market Street, San Francisco 2, YU 2-3412.

WANTED—YOUNG INTERNIST, Board Certified or Board Eligible to become associated with group of twelve doctors. Salary of $1000.00 per month plus automobile allowance, with all other bills paid for by the group. Contact M. R. Karstaedt, Business Manager, P.O. Box 7, Visalia, California.

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WANTED: PEDIATRICIAN—Los Angeles 22-man group. Board certified or eligible; earning range $18,000-$30,000; younger man preferred. State particulars. Write Medical Director, 10001 Venice Boulevard, Los Angeles 34, California.

INTERNIST (generalist acceptable) FOR LOCUM TENENS from January thru June, possibly longer, to work with congenial group of 15 physicians in S. F. Bay Area (Richmond). Salary according to training and experience. Opportunities for permanent position. Write Med. Dir., Permanente Medical Group, 14th & Cutting Blvd., Richmond.

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(Continued on Page 90)

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How quietly but surely twilight comes. So it is with Placidyl's gentle non-barbiturate sedation. Placidyl persuades, never insists. Its action is prompt, yet certain as dawn...a dawn unmarred by hangover. To the restive, give the magic of restfulness. Give Placidyl.

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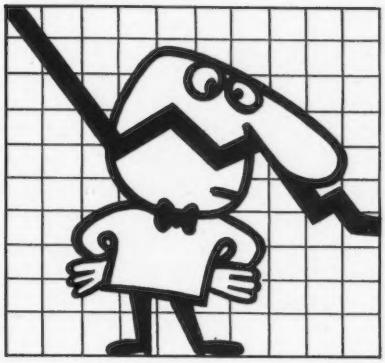


A U. S. Senator recently said, "In investigating the pharmaceutical industry, we are investigating and inquiring into an industry that has won and which deserves public approval and confidence... It has been my judgment that the hearings to which I have referred, so far have been prejudiced and distorted." To paraphrase a political saying...

Let's Look At The Record On Drug Prices

In relation to "real income," drug prices have actually declined in recent years. At prevailing wages in 1929, it took 91 minutes of working time to pay for the average prescription. Only 86 minutes of labor paid for the average prescription in 1958. As one economist put it, "If the retail prices of drugs had risen as much as the consumer price index since 1939, it would cost the consumer at least an additional one billion dollars to buy the drug preparations now consumed." He goes on to compare the $19.02 per capita drug expenditure in 1958 with the $37.19 spent on tobacco products and $53.72 for alcoholic beverages.•When your patients inquire about the cost of medication, perhaps these facts will be helpful in explaining that today's prescription, averaging about $3.00, is a relatively modest investment in better health and a longer, more productive life.

This message is brought to you in behalf of the producers of prescription drugs. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

New Approach Described to Physical Rehabilitation

(Continued from Page 35)

imposing bodily movements for which the damaged part of the brain normally was responsible. These exercises were carried out regularly with the help of adults for five minutes, four times daily.

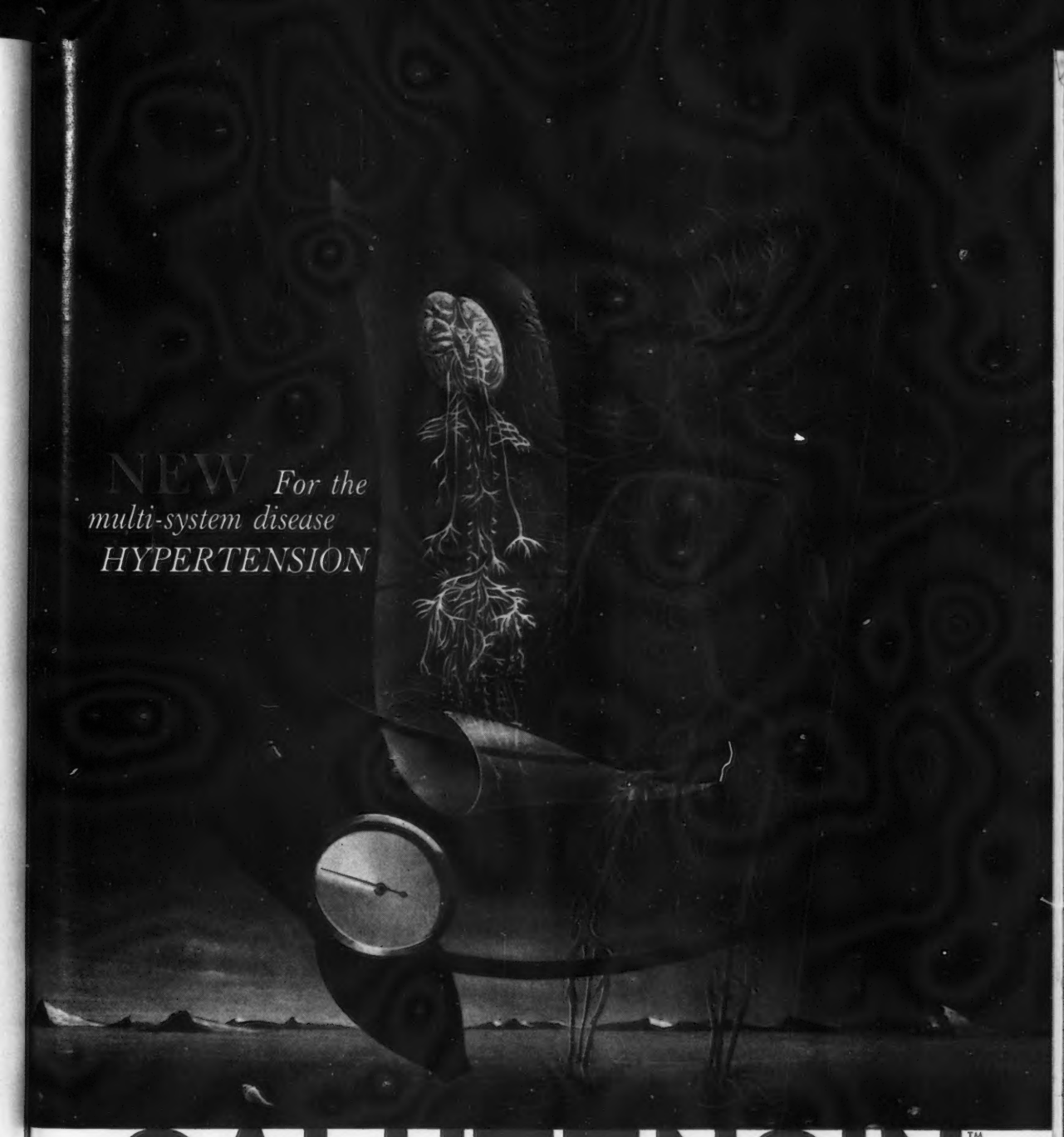
For example, one adult would move the child's head, another his right arm and leg and another the left arm and leg.

"It should also be stressed that during the study all other programs of therapy or habilitation were discontinued and that no mechanical aids, such as braces or crutches, were used," the authors said.

The results, they said, were "sufficiently encouraging to warrant an expanded and continued study of these procedures."

"Of the 20 children unable to move and the 17 unable to walk, none remained at these stages. Twelve children were ready to walk at the end of the study. Eight were creeping . . . and four were holding onto objects.

"Eleven children learned to walk completely independently. All but two of these had begun treatment at, or before, two years of age, and all achieved completely independent walking in less than 12 months of treatment."



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Comprehensive information on dosage and precautions in official package circular or available on request.

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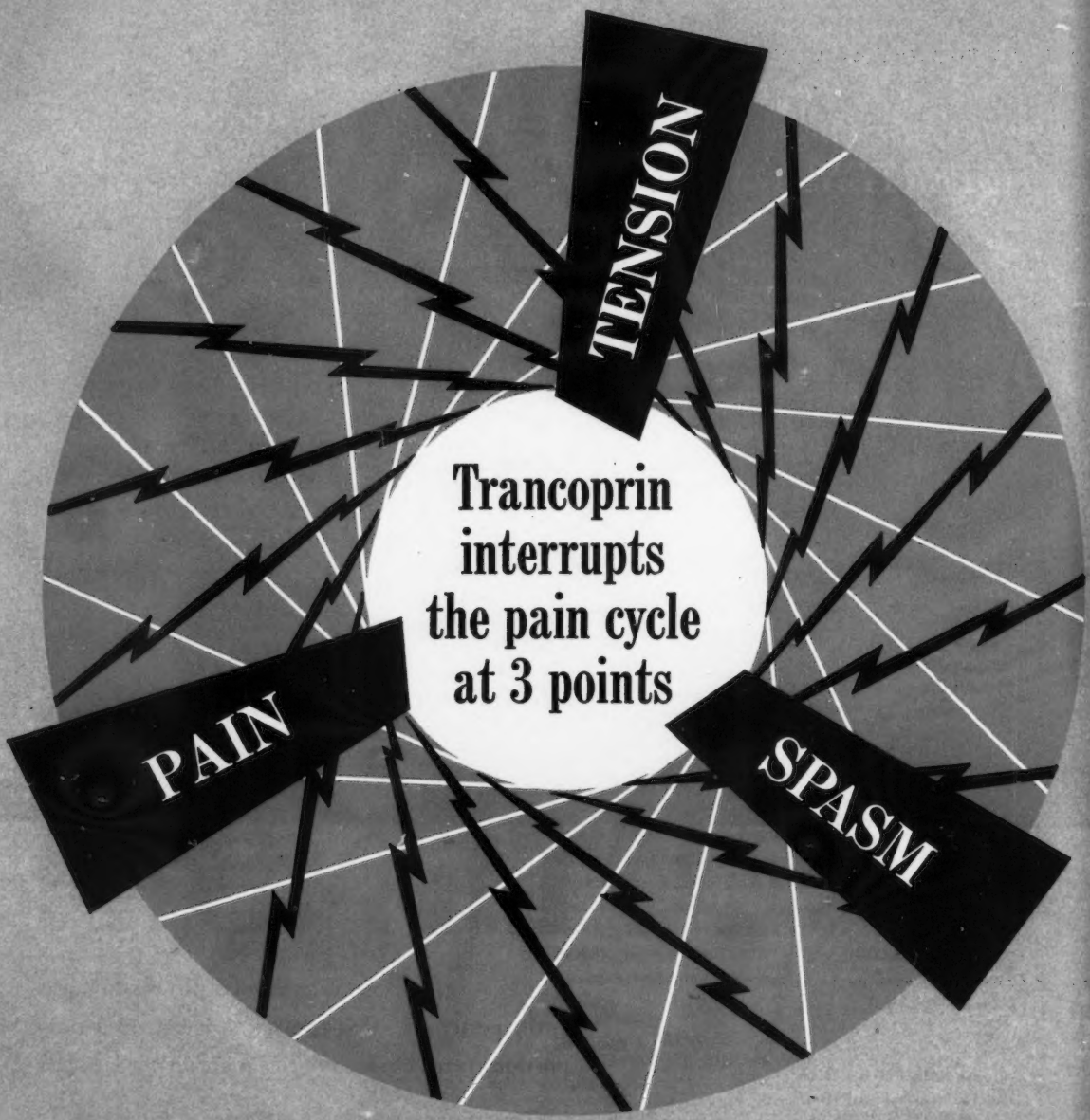
acetylsalicylic acid (200 mg.) and chlormezanone (50 mg.)

Tablets



a broad spectrum non-narcotic analgesic

Trancoprin, a new analgesic, not only raises the pain perception threshold but, through its chlormezanone component, also relaxes skeletal muscle spasm[1-6] and quiets the psyche.[2,3-5,7]

The effectiveness of Trancoprin has been demonstrated clinically[8] in a number of patients with a wide variety of painful disorders ranging from headache, dysmenorrhea and lumbago to arthritis and sciatica. In a series of 862 patients,[8] Trancoprin brought excellent or good relief of pain to 88 per cent of the group. In another series,[9] Trancoprin was administered in an industrial dispensary to 61 patients with headache, bursitis, neuritis or arthritis. The excellent results obtained prompted the prediction that Trancoprin "... will prove a valuable and safe drug for the industrial physician."[9]

Exceptionally Safe

No serious side effects have been encountered with Trancoprin. Of 923 patients treated with Trancoprin, only 22 (2.4 per cent) experienced any side effects.[8,9] In every instance, these reactions, which included temporary gastric distress, weakness or sedation, were mild and easily reversed.

Indications

Trancoprin is recommended for more comprehensive control of the pain complex (pain → tension → spasm) in those disorders in which tension and spasm are complicating factors, such as: headaches, including tension headaches / premenstrual tension and dysmenorrhea / low back pain, sciatica, lumbago / musculoskeletal pain associated with strains or sprains, myositis, fibrositis, bursitis, trauma, disc syndrome and myalgia / arthritis (rheumatoid or hypertrophic) / torticollis / neuralgia.

Dosage

The usual adult dosage is 2 Trancoprin tablets three or four times daily. The dosage for children from 5 to 12 years of age is 1 tablet three or four times daily. Trancoprin is so well tolerated that it may be taken on an empty stomach for quickest effect. The relief of symptoms is apparent in from fifteen to thirty minutes after administration and may last up to six hours or longer.

How Supplied

Each Trancoprin tablet contains 300 mg. (5 grains) of acetylsalicylic acid and 50 mg. of chlormezanone [Trancopal® brand]. Bottles of 100 and 1000.

Trancoprin Tablets / non-narcotic analgesic

References: 1. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 2. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 3. Gruenberg, Friedrich: *Current Therap. Res.* 2:1, Jan., 1960. 4. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 5. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 6. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 7. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 8. Collective Study, Department of Medical Research, Winthrop Laboratories. 9. Hergesheimer, L. H.: An evaluation of a muscle relaxant (Trancopal) alone and with aspirin (Trancoprin) in an industrial medical practice, to be submitted.

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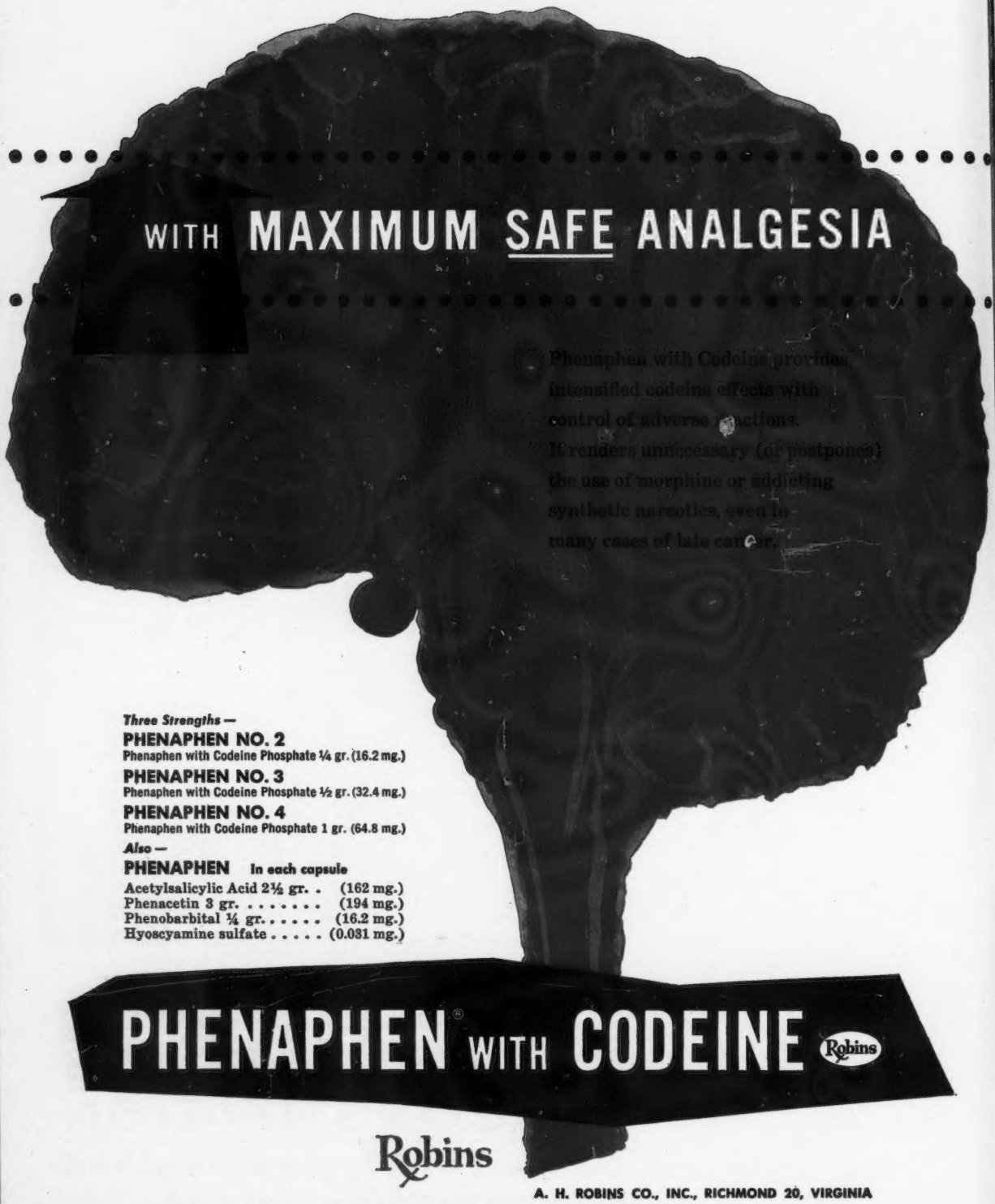

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Wednesday, January 18, 1961
The White Fence Farm

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Sunday, January 22, 1961
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The Tavern-on-the-Green

CHARLESTON, SOUTH CAROLINA
Thursday, February 23, 1961
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ANCHORAGE, ALASKA
Saturday, February 25, 1961
The Westward Hotel

BAKERSFIELD, CALIFORNIA
Friday, March 3, 1961
The Bakersfield Hacienda

WILLIAMSBURG, VIRGINIA
Wednesday, March 8, 1961
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Wednesday, April 12, 1961
The LaGrange Inn

BUTTE, MONTANA
Saturday, April 22, 1961
The Finlen Hotel

ITHACA, NEW YORK
Thursday, April 27, 1961
The Statler Club

ERIE, PENNSYLVANIA
Wednesday, May 3, 1961
The Hotel Lawrence

SACRAMENTO, CALIFORNIA
Wednesday, May 10, 1961
The El Dorado Hotel

LOS ANGELES, CALIFORNIA
Wednesday, June 7, 1961
The Statler Hotel

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

CLASSIFIED ADVERTISEMENTS

(Continued from Page 80)

SITUATIONS WANTED

ASSISTANT TO A GENERAL PRACTITIONER in Southern California. American-trained graduate with post-graduate training in radiology. Have California license. Please contact James W. Fitzgerald, M.D., 703 Acacia Street, Hawthorne, California.

OBSTETRICIAN-GYNECOLOGIST; 32; married; board qualified and available June, 1961; military service completed; desires association and/or partnership with individual or group; California license. Contact Wilson J. Rabban, M.D., 1813 Bernard St., Bakersfield, Calif.

OPHTHALMOLOGIST, middle fifties, university hospital trained, certified, California licensed, desires association with California physician. Major surgery only in assistant's capacity. Pleasant working conditions more important than size of income. Box 95,660, California Medicine.

SURGEON, 35, married, Board Certified, additional experience in peripheral-vascular diseases, desires association with surgeon or group. California license. No military obligation. Box 95,640, California Medicine.

PRACTICES FOR SALE

ESTABLISHED GENERAL PRACTICE, central California; wonderful climate, no smog or freeways. Liberal arrangements, low price for quick sale. Will introduce til December 15th when service calls. Box 95,585, California Medicine.

VERY ACTIVE GENERAL AND INDUSTRIAL MEDICAL PRACTICE in a suburb of Los Angeles near ocean and Palos Verdes. Five hospitals within 3 miles from office. Gross $80,000. Will easily support group of 3 general practitioners or OB, internist and surgeon. Modern, fully-equipped medical building. 2,000 sq. ft. X-ray lab. Parking for 10 cars. Reasonable terms. Box 95,615, California Medicine.

ELEVEN-YEAR PRACTICE in exclusive rapidly growing Oakland suburb. Fully equipped office for one or two men, internal medicine or general practice. Will stay to introduce. Box 95,645, California Medicine.

FOR SALE: GENERAL PRACTICE, and home with office adjoining. Refrigeration. Desert area, boating, fishing and hunting. Hospital available. $30,000, terms. Collections should exceed this in one year. Box 95,650, California Medicine.

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ORANGE COUNTY—Next door to new, modern 150-bed Martin Luther Hospital. Individual custom designed, air-conditioned, 1800 sq. ft. building for two OB-GYN specialists. Ownership provided by rent payment. Medical Center Hospital Co., 1201 North Euclid, Anaheim, California. PRospect 4-4520.

SANTA BARBARA, CALIF. Fully modern medical office building for lease, 20,000 sq. ft., ample parking, due for completion April 1, 1961. In center of city. Reservations for individual suite design and space available prior to construction. Particularly interested in Pediatrics, Orthopaedics, OB-GYN. Others welcome. Call Woodland 6-0833, John M. Richards, M.D., 1921 State St., Santa Barbara, Calif.

NEW MODERN OFFICES IN SACRAMENTO'S FINEST MEDICAL-DENTAL BUILDING now under construction in Sacramento's fastest growing community. For information call or write: Rosemont Development Co., Inc., 8904 Rosewood Drive, Sacramento 26. Phone EMpire 3-2693.

UNFURNISHED MEDICAL OFFICE—8 rooms in Nevada City, California. Office in good repair and in center of town. Hospital facilities available nearby. Community is in need of additional physicians. Rent only $100.00 per month. Inquire through Mr. John Looser, 311-A Neal Street, Grass Valley, Calif.

ONTARIO, CALIF. Available immediately. Spacious, modern doctor's office. Share laboratory, surgery, recovery room, and waiting room with established M.D. Exclusive use of consultation room and three treatment rooms. Some equipment and furniture furnished. Three-year lease with option. 515 N. Laurel Ave. YUkon 6-2772.

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Composition: 200 mg. Miltown (meprobamate, Wallace) + 25 mg. hydrochlorothiazide

Dosage: For hypertension, 1 tablet four times a day. For congestive failure, 2 tablets four times a day.

Supplied: Bottles of 50 white, scored tablets

Frozen Foods Found Safe, Nutritious

Frozen foods handled according to good commercial practice are "safe, nutritious, and flavorful," it was reported in the October 29 issue of the *Journal of the American Medical Association.*

However, the report said studies showed frozen precooked foods, such as poultry pies and prepared dinners, "offer ideal conditions" for contamination.

In a report to the American Medical Association Council on Foods and Nutrition, Horace K. Burr, Ph.D., and R. Paul Elliott, M.S., Western Regional Research Laboratory, U. S. Department of Agriculture, Albany, Calif., said:

"The inherent protective mechanisms found in frozen raw meats, fruits, and vegetables are not present in frozen precooked foods of a moist, bland, neutral nature, such as poultry pies and prepared dinners. Few incidents of food poisoning have been reported. . . .

"Theoretical possibilities of outbreaks, however, are inherent in these precooked foods. They often are contaminated with bacteria in the food plant after they are cooked and offer ideal conditions for bacterial growth.

"Thorough heating of a precooked food by the housewife always is advisable."

The authors pointed out that firms with mass production and laboratory control can maintain low bacterial levels. In the past 10 years, they said, competition has eliminated many smaller firms which used kitchen methods without laboratory controls.

Many bacteria are killed in the freezing process or in subsequent storage, they said.

Food poisoning organisms usually cannot grow at temperatures maintained in an ordinary household refrigerator, they added. Therefore, they said, any microbial growth in foods held at 40 degrees Fahrenheit or below will cause spoilage but will not endanger consumer health.

The studies also showed that frozen foods were "remarkably sensitive" to temperature increases.

"Whereas most chemical reactions are 20 to 35 per cent more rapid when the temperature rises 5 degrees Fahrenheit, certain deteriorative reactions in frozen foods may double, triple, or quadruple their rates with such a temperature rise," the report said.

As a means of improving the quality of frozen foods reaching the consumer, the researchers said the Association of Food and Drug Officials of the United States is developing a frozen food handling code. Meanwhile, they said nine industrial associations, representing processors, transportation companies, distributors, and retailers, are collaborating in the development of voluntary standards for industry practice.

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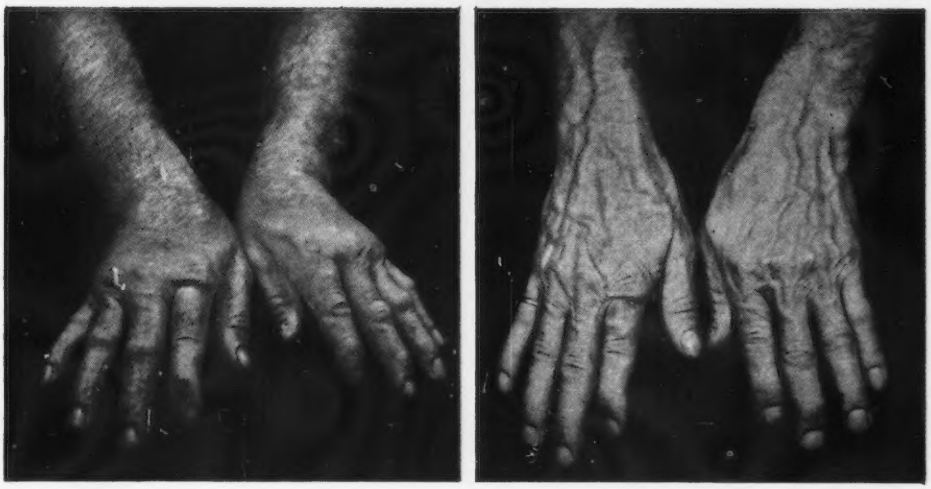

FURACIN-HC Cream combines the anti-inflammatory and antipruritic effect of hydrocortisone with the dependable antibacterial action of FURACIN®, brand of nitrofurazone—the most widely prescribed single topical antibacterial. The broad bactericidal range of FURACIN includes stubborn staphylococcal strains, and there has been no development of significant bacterial resistance after more than a dozen years of widespread clinical use. FURACIN is gentle to tissues, does not retard healing; its low sensitization rate is further minimized by the presence of hydrocortisone.

FURACIN-HC Cream is available in tubes of 5 Gm. and 20 Gm. Fine vanishing cream base, water-soluble.

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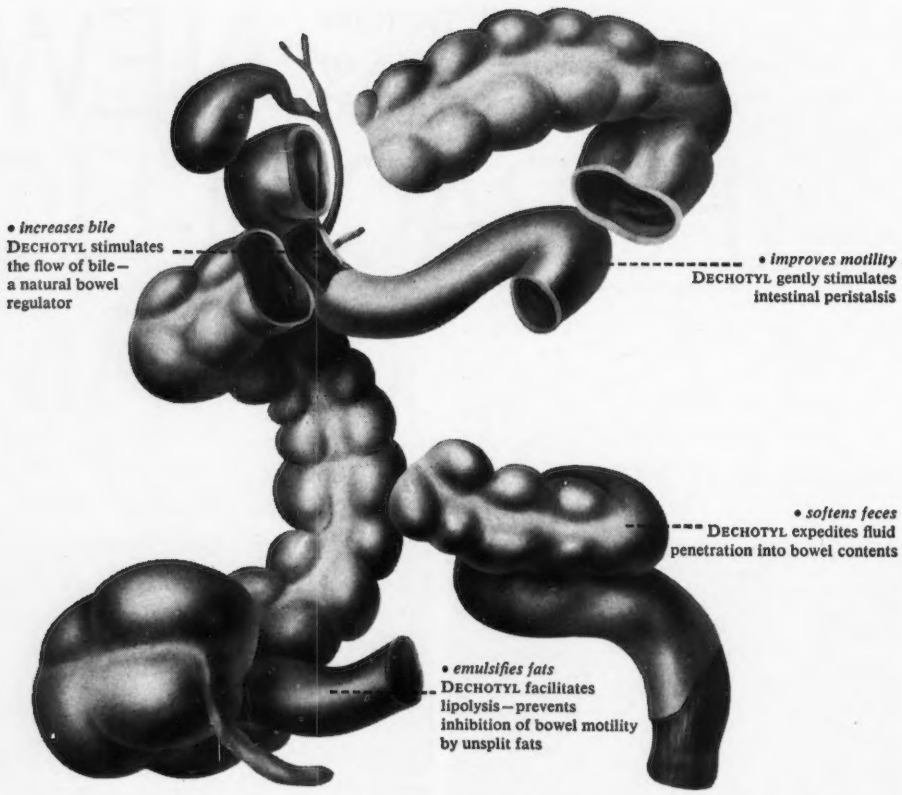

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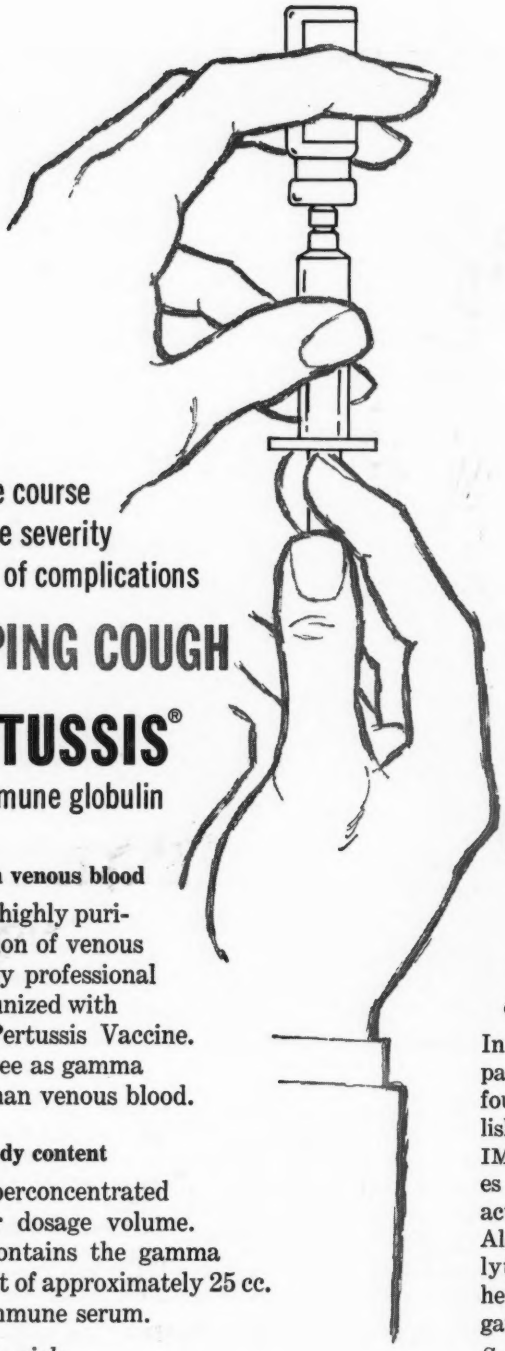

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lessen the severity
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